

# 2050

# High in Hope

**John Savage**

The Initiative, Business West









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Proposed HS3 on the Second Severn Crossing (detail) (Alec French Architects).

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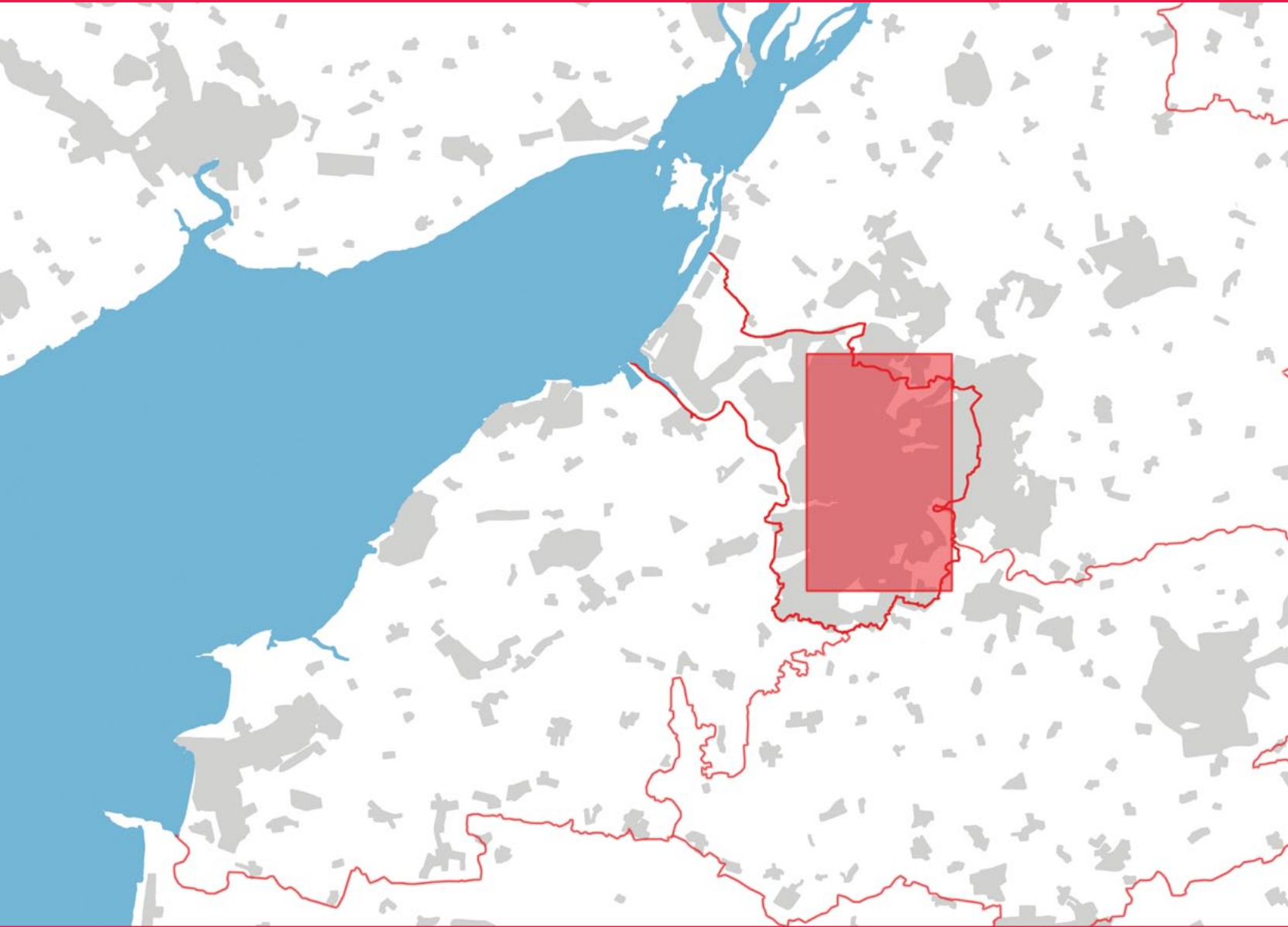
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For the Twelve; the founders of The Bristol Initiative and particularly Tony Shepherd, who mercifully remains, and started it all off for Bristol, and for Louis Sherwood, John Burke and Douglas Claisse, who gave so much support but are sadly no longer with us.





This vision for the West of England looks at an important and successful city-region in the United Kingdom and asserts that by creating a strategic master plan for the whole territory, such success can be increased in quantum from a growing population and magnified in value through efficiencies that will spring from enlightened orchestration.

Map of the West of England with red block representing the 6,000 hectares needed for urban growth to 2050 (Robert Freshwater).

It addresses the inevitability, indicated by consistent statistics over the previous 20 or so years, that the population will grow by inward migration and indigenous expansion regardless of attempts to suppress that tendency. The challenge is daunting: extra living and working space will be required within existing urban areas, but the demand will also spill out into the countryside.

Over the 40-year period to 2050, the minimum space required to accommodate the 200,000 new homes and 300,000 new jobs required by a population that will have increased by 500,000 will be 6,000 hectares. The space occupied by the present Bristol unitary authority is approximately 11,000 hectares.<sup>1</sup>

The vision seeks to establish that thoughtful strategic planning in the broadest sense will yield greater positive outcomes, even as the properly husbanded vine or field of corn provides a superior harvest. It also points to the danger that, without such a vision, the unavoidable growth will be haphazard, unproductive and, possibly, corrosive.

It suggests that taking time and resource to imagine and shape a vision for the longer-term future of any place is the best pathway to sustainable solutions for current challenges, imbalances and inequalities. The proposals and ideas are not absolutes; they are selected examples and the book is only a starting point. Continuing debate, collection of evidence and development of concepts into achievable realities will be facilitated through a website designed specifically for that purpose. The book most certainly is not a handbook for the solution of all ills.

The vision argues that a ‘deal’ can be made with the public, both directly and via local and central government and key national authorities, through which a radically different approach to managing the public realm could be adopted. It plans new dwellings on a scale that will address the current embedded and iniquitous shortage of homes, provides for the steadily increasing population

and promises a balanced and adequate supply of new employment opportunities. It offers the West of England, with a current population of one million, the possibility of full employment. It predicts a generally engaged, educated and healthy citizenry.

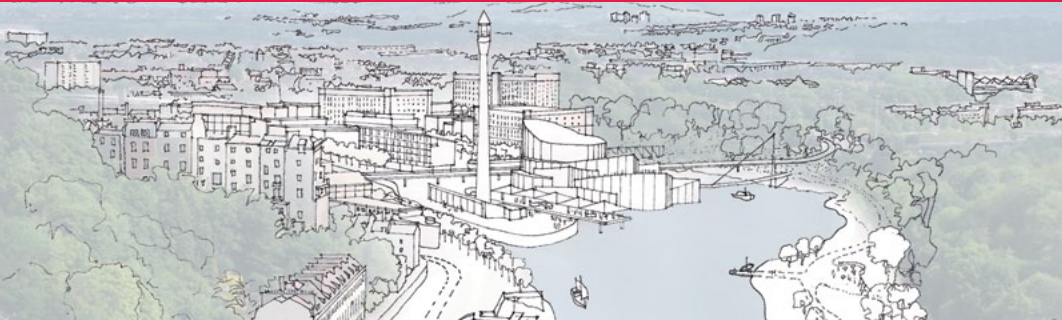
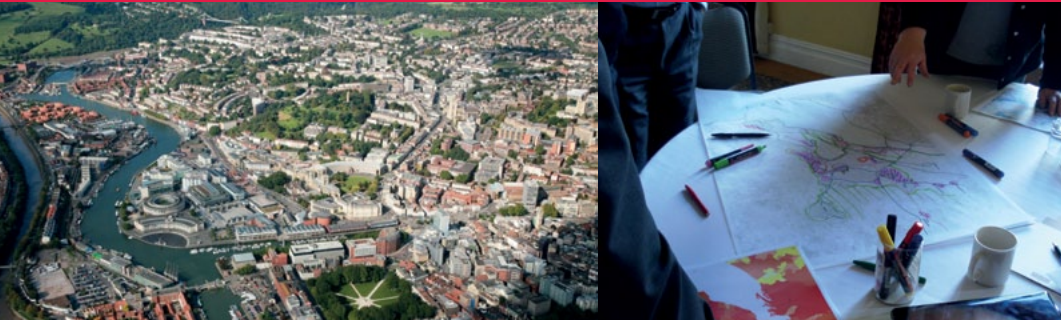
The attraction for government, for ‘UK plc’, is a tangible and improving return on public investment, with a significant increase in the Gross Domestic Product of the city-region.

Implementing the deal will require new permissions, perhaps primary legislation, and great encouragement. It will certainly demand imagination and courage and a tenacity that carries it through the crushing blight of short-termism.

Machiavelli, the great political philosopher, recognised the dangers in resistance to change in *The Prince* and his observations remain relevant today:

And it ought to be remembered that there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things, because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new. This coolness arises partly from the fear of the opponents... and partly from the incredulity of men, who do not believe in new things until they have had a long experience of them.<sup>2</sup>





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# Foreword

Human beings have always been interested in arranging their communities in order to make the most of available resources. That has meant, over thousands of years, devising living spaces in which people could congregate safely for shelter, commercial exchange and the general conduct of everyday life.

Below: Aerial view of Bristol city centre showing Queen Square, Lloyds Amphitheatre, the Floating Harbour and, in the distance, Clifton Suspension Bridge (Destination Bristol).

Opposite: Procession in front of Bath Abbey and the entrance to the Roman Baths, two of the historic visitor attractions in the city (© Colin Hawkins Photography).



Those spaces have usually been merely utilitarian in design. However, the greatest societies in history have had exceptional aspirations, seeking to develop aesthetically pleasing spatial conceptions underpinned by an ambition to produce an ideal built environment where form and function are perfectly combined. That sense of ambition also spread beyond the creation of buildings and public spaces into the provision of education and health services and the nurturing of cultural activity.

Our task is to match the best that has gone before in all those respects, to reject the bland and the mediocre and instead create a wonderful place for our children and grandchildren to inhabit.

When looking for inspiration for the basis of a plan for the future of the West of England city-region, I was drawn to the impressive work of Daniel Burnham who, in 1909, developed his outstanding One Hundred Year Vision for Chicago. This completely changed the city and allowed the development of a new order of opportunity. Burnham

made a notable and challenging vision statement when he exhorted his fellow activists to:

Make no little plans. They have no magic to stir men's blood. Make big plans, aim high in hope and work, remembering that a noble, logical diagram once recorded will never die.<sup>3</sup>

## Our own past

Consider the record of Britain in recent years when facing the challenges of the damage-clearance programmes after the Second World War. Though sadly failing to retain and repair the better-quality and less-damaged estate while removing only the substandard and inadequate, there were ambitious attempts at productive social engineering. Ideal solutions were hampered by a scarcity of appropriate materials and the lure of easy opportunities for inappropriate gain. Crucially, the importance of sustaining the fabric of long-established communities was dangerously ignored, with far-reaching consequences for coherence. Families and neighbours from centuries-old communities were separated and deep connections were severed.





My own passion for improvement has at its heart a deeply held conviction born of personal experience: I am one of that generation in England who, in the slums of South London, passed from war-endangered infancy to troubled peacetime childhood. Reflecting now, ten years into a new millennium, on the decades that have passed, it is clear that the quality of urban life still reveals a woeful divide in society with those benefiting from worthwhile economic activity on one side and generations of unemployed, unhealthy and poorly educated on the other. I cannot understand why we allow this state of affairs to continue and why we remain so complacent about what appears to be a national inability to fully educate and enlighten all, and not just some, of our young people – an imperative which should underpin every civilised society.

In the closing years of the twentieth century, Professor Ken Robinson, then Chair of the National Advisory Committee on Creative and Cultural Education, made this telling observation:

We have spent years partially educating our children. The result is adults who have lost touch with, or never discovered, their own creative, intellectual and emotional abilities.

And at the start of the new millennium, Charles Murray had this to say, writing in *The Sunday Times*:

Over the past two decades larger and larger numbers of British children have not been socialised to norms of self control, consideration for others and the concept that actions have consequences.

I remain deeply troubled by the continuing carelessness on these matters and by the wholly inadequate responses made to the inappropriate living conditions of significant numbers of people in our communities. Indeed, the simple lack of sufficient housing is a scandal. Above all, it is an abhorrence to me that there are places in these otherwise blessed isles where life expectancy for those in adversity can be ten years less than for those fortuitously absorbed into routine economic life.

### Aim high

A dangerous lack of ambition about standards and quality when it comes to place, education, health and culture exists throughout the land, with signs of something approaching a conspiracy of mediocrity as well as a wholesale failure to commit to long-term strategic thinking, planning and organisation.

Opposite: Engineer working on wing section for the A400M, a military transporter, at Airbus, part of the internationally significant group of aerospace and advanced engineering industries in South Gloucestershire (Airbus).

Right: Oak tree totem in Leigh Woods, a National Trust Reserve in North Somerset (Destination Bristol).

One reason for that is the nature of our system of democracy, in which the local electoral cycle can be as short as 12 months. It is absolutely right that people have a chance to express their views, but surely there must be a way in which the long-term interests of generations to come are protected?

It must be right to conceive that the living places of this peaceful and beautiful edge of Europe, particularly our cities, could be organised and grown in productive ways according to a Grand Aim, a Vision, which sets out quite deliberately to exclude poverty in all its forms.

Far-sighted and accomplished contributors could, if they were given a chance, design such a vision having understood both the inevitabilities and the possibilities of growth and having honestly evaluated the opportunities and threats. They could plan against uncertainties and facilitate the optimisation of places, while providing appropriate compensation for those required to make sacrifice in the task of generally improving the common condition.

### Together we can achieve

The wider city-region which encompasses Bristol and Bath already demonstrates more of the vital ingredients for a great and ambitious vision than any other in the UK.







It starts with geographical advantages: the splendour and the variation of the surrounding countryside and the relative proximity of London, whilst at the same time being at the heart of an efficient distribution network which captures the bulk of the UK’s population.

People have tended to migrate towards this place over many centuries and that process will not change. There is a need not to be blind to the inevitable and instead to work out ways in which change can be managed well and so extract clear benefits for the community.

In the pages of this book are glimpses of the depressing results that will arise from inaction and complacency. Most importantly, there are hopeful descriptions of what great things might be achieved by the middle of this century through the initiation of strategic activity starting now.

The dark inferences point to a potential for increasing hardship and unhappiness and the destructive outcomes that can arise. Over centuries, a great many people have endured high levels of disadvantage and lack of opportunity with stoic acceptance until a final, inflammatory proposition unleashes destructive and ugly revolt. The riots in Liverpool and Brixton in 1981 and subsequent, lesser explosions leave stark reminders in

living memory of the dangers for all the population if such conditions are not removed. There should never be a return to those days.

The alternative view identifies the facts about advantage and disadvantage and offers imaginative ways of using a growing community to provide opportunities for all. We can lead the way in finding different approaches to the way we work, where and how we live, the ways we move around, how we educate our young people and how we improve the health of the whole community.

We look also to the great potential benefits arising from new technology. It must be true that by 2050 the car will not be the vehicle of choice for the majority of journeys. Existing wide expanses of tarmac may be underused and become available for new methods of delivering fast and efficient public transport. If there were less than half the current number of private vehicles in use, there would be ample space to run high-speed trains in a shared use of motorway track. There are also imaginative ways, already within current technologies, of governing the use of roads by time, speed and location. Innovations could be developed which would allow automatic selective charging to generate revenues which would be reinvested in the

provision of new and popular modes of public transport. They will be attractive because of their frequency, comfort and availability.

Technology in the home will also aid the diagnosis, treatment and control of many illnesses and infirmities so that delay will no longer be a contributing factor to unnecessary demise.

Perhaps more controversially, we address the ways we are governed, defending local democracy but picking up innovative approaches that will involve more people taking responsibility for the care of both the community and the public realm.

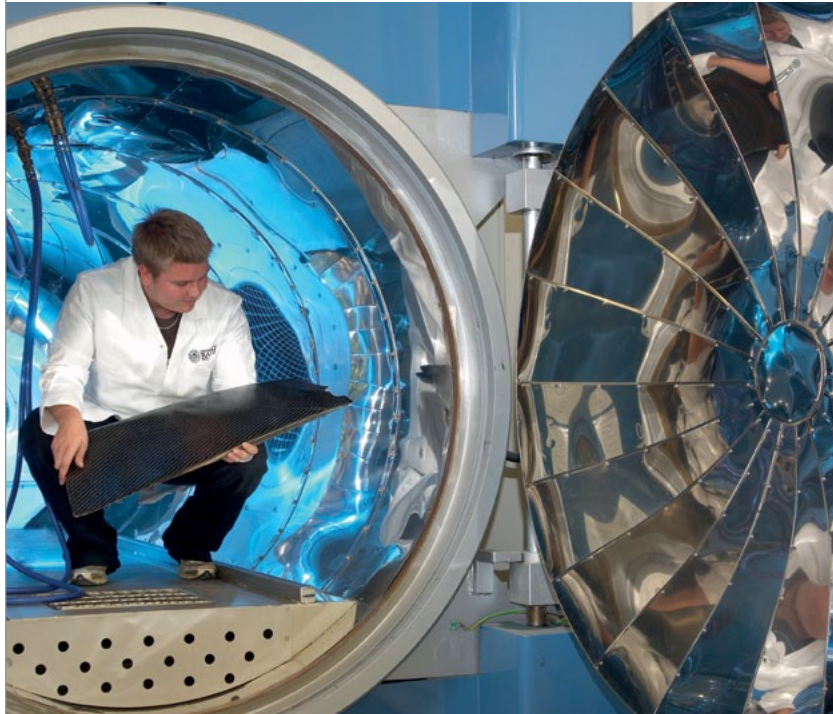
Equally difficult for some people to accept will be the unavoidable need to encroach onto green space. The demand for workspace and housing is an inevitability that must be faced; it is a national disgrace that no strategic, cohesive and credible plan to provide homes for all exists. Shelter is the most basic of human requirements. The mistakes of the past do not need to be repeated. New living and working places can be calm and attractive and effectively linked to the wider community. Investment in the improvement of the best of the environment and accessibility to it can more than offset the perceived cost of some spatial loss.

Finally, for me the ultimate point of all these endeavours is to create a better experience for people. I have no doubt about the legitimacy of profitable enterprise and the absolute need for it, and it is important to remember that without commerce there is nothing. However, the true goal must be to ensure the possibility of the proper enjoyment of life for all people.

Strength of purpose and serious determination are needed, not just to get better and create better places, but to be as good as we can be and achieve as much as we possibly can.

JCS, June 2011

Opposite and below: Chemistry student at the University of Bristol, students at drawing boards at the University of the West of England, autoclave at University of Bath and finale of fashion show at Bath Spa University (© the respective universities). The higher education sector makes a significant contribution to the prosperity, culture and diversity of the city-region.





# Developing the vision

In 1988 a group of 12 enterprising business people, led by the author, came together to see what they could do to address some of the long-entrenched social problems of their city. Working with private and public sector partners, the Bristol Initiative instigated ambitious projects to tackle homelessness and educational deprivation and to support economic prosperity.

Below: Participants in the Visioning and Spatial Planning Workshop marking areas of potential growth on a map of the West of England (David Lock Associates).

Opposite: Participants at the Drivers for Change Workshop using the information cards provided to prompt discussion (Arup).



These have included, among others, The Bristol Foyer (part of the Bristol Urban Programme), ABLAZE (bringing business people into schools), Education Unlimited (assisting disaffected young people to re-engage with society), improvements to the retail offer of Bristol (through the Broadmead Board), the regeneration of Bristol Harbourside, the promotion of tourism (through Destination Bristol and Bath Tourism Plus) and the leadership and support of cultural activity (through Bristol Cultural Development Partnership). Today, The Initiative has grown to 250 members who share a commitment to improving the city-region, increasing prosperity for all and eradicating poverty. It is a core element of Business West, the leading business organisation in the South West.<sup>4</sup>

This publication is part of an extensive programme of projects and events conceived by The Initiative as a way of developing and promoting a credible 40-year vision for the West of England that meets the specific needs of the city-region and enables it to continue to grow as the economic powerhouse of the South West.

The development of this vision is at the heart of what The Initiative and its members stand for: providing leadership to fill a void, ensuring the business voice is heard and championing the West of England as *the* place to do business

and to live. It is about joining up relevant plans and strategies on a range of issues and having a comprehensive, cohesive view of the future. This is the right time to be doing this work. The Regional Spatial Strategy for the South West has been scrapped and national planning policy lacks either a city-regional or visionary element.

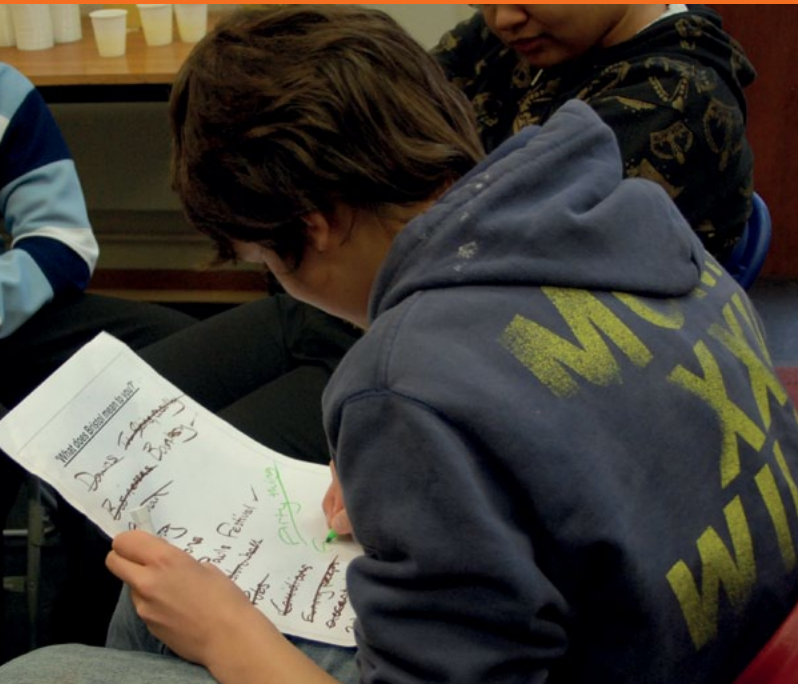
The 2050 vision has emerged through a succession of discussion forums, workshops and briefing sessions that have informed people about what is happening in comparable city-regions in other parts of the UK and Europe, facilitated discussion of the specific qualities and needs of the West of England in this broader context and started the process of bringing together a coherent strategy for managing growth. Participants have included business men and women, architects, urban designers, town planners, academics, property developers, transport experts, local residents and young people, some of whom have also regularly attended strategy meetings to fine-tune the proposals.

The key consultation activities have been the Drivers for Change Workshop (20 January 2010), Visioning and Spatial Planning Workshop (10 and 11 February 2010), Leaders of the Future Workshop (17 March 2010) and GWE Business West Staff Workshop (7 June 2010). Further details of each of these follow.

The half-day Drivers for Change Workshop was led by Arup and attracted 40 participants drawn from across the city-region.<sup>5</sup> It aimed to identify and understand the trends and issues shaping future change in the West of England. The top five of the 25 key drivers for change identified by the group were:

- The shortcomings of existing political and administrative boundaries.
- The development of eco-cities.
- Transport, particularly improving connectivity and reducing car dependency.
- Education, skills and the knowledge economy.
- Business opportunity.





It was noted that if an on-street poll of local people had been conducted, crime would probably have been high on the shortlist. This is an issue that continues to be of primary concern for many sectors of the general public, even though statistics show that the crime rate is falling.

The drivers for change are referred to again in the opening of the Where We Are Today section of this book.

The intensive, two-day Visioning and Spatial Planning Workshop was led by David Lock Associates, who have played a crucial role in developing the shape and content of the vision in general and this publication in particular.<sup>6</sup> Five 'big ideas' for the spatial aspect of the 2050 plan came out of the workshop exercises and discussions. These were:

- Improving transport and connectivity to match the aspirations of a competitive, international city-region.
- Creating a city-regional park.
- Improving access to and use of the Severn Estuary shore and the River Avon.
- Redressing the imbalance between North and South Bristol.
- Changing the mode of governance to one that could more effectively deliver long-term, large-scale projects.

Participant at the Leaders of the Future Workshop deciding what Bristol means to him (Common Purpose).

Some of these are covered in more detail in the Where We Will Be section of the book.

The one-day Leaders of the Future Workshop was facilitated by Common Purpose.<sup>7</sup> Fifty 13 to 14-year-olds representing five Bristol secondary schools – a mixture of private and state-funded – explored what they felt was unique about their city and their vision for the future. Aspects identified as being distinctive included the work of Isambard Kingdom Brunel (specifically the Clifton Suspension Bridge and ss *Great Britain*), Banksy, TV and media production, Cabot Circus, Concorde and aviation, architecture and the Bristolian accent. The young people's future vision comprised a range of immediate improvements to the city as well as longer-term ideas. These were grouped under six themes.

- **Transport:** including a travelator up Park Street, a hover port, more pedestrian bridges, specific initiatives to encourage more walking.
- **Housing:** including a balloon house and other creative styles of domestic architecture, more flats, new housing on green belt.
- **Environment:** including wind turbines and a tidal barrage, trams, a shared system of cycle routes, reduction in car use, more allotments for local food production, eco-housing, more recycling bins.
- **Economy:** including renewable/environmental technology, education, a football stadium, an arena, an expanded airport, digital media, expansion projects.
- **Education:** including new skills centres, a new art school, community payback for training.
- **Quality of life:** including more leisure time and facilities, protected green space, health care for an aging population, community cohesion, integrated neighbourhoods.

Participant at the Leaders of the Future Workshop using scrap materials to create a model of a future vision for the city (Common Purpose).

Some of these ideas – or variations on them – are to be found later in the book.

The one-day GWE Business West Staff Workshop for Bristol and Swindon employees was led by The Initiative team. It was an opportunity for staff to learn more about the 2050 vision and to contribute their own ideas to the consultation process. In discussion, staff prioritised suggestions for change for their local area. Those for Bristol were grouped under five themes:

- **Transport:** including significant new investment in infrastructure; provision of reliable, clean, safe, regular, 24/7, accessible public transport; more commercial freight handling and improved facilities at the airport; better promotion of deep-sea container facility at the port; new Severn tunnel.
- **Housing:** including more affordable dwellings; greater individuality in design; priority for developing underused brownfield sites; optimum sustainability levels for new developments; retro-fitting of older properties; emphasis on vertical building.
- **Economy and jobs:** including improved overseas tourism effort; retention of high-technology sector; reduction in dependency upon the public sector; centralised business support.
- **Education and skills:** greater business involvement in the education system; more effective co-ordination; more vocational courses.
- **Sustainability:** more education on sustainability issues/ implications across all age groups; charging points for electric cars; improved public transport links; reintroduction of waterways and trams.

Again, many of these ideas have been incorporated into the vision.



Reference has also been made to the South Bristol Economic Study (2010), a joint project of the South West Regional Development Agency and The Initiative.<sup>8</sup> Out of that work came a charter on how to make South Bristol ‘a place to be’ that included:

- Creating a diverse economy.
- Ensuring the lowest possible carbon emissions in all activities.
- Designing spaces and buildings to be flexible and of the highest quality.
- Providing a cutting-edge public transport system.
- Tackling poor health, education and environments.
- Building community ownership.

South Bristol is a priority area for the 2050 vision and is discussed in more detail later.

There were no constraints placed upon participants in any of these exercises and it is interesting to note that certain key observations kept recurring through the consultation process among the different groups. The central message has been that the West of England is already attractive to people and businesses, but there is uncertainty about where it is going and why; there is no longer-term vision, no overall leadership, no sense of a shared direction. The city-region has a population of around one million, but demonstrably far less infrastructure – roads, trains, trams,





airline connections, utilities – than successful European city-regions of similar size, such as Toulouse, Lille or Oslo. It is clearly growing its population fast and modernising its economic activity, but it does not have its fair share of supporting investment from central government. These factors are preventing the West of England from making a greater contribution to the UK's wealth and culture.

The Initiative has produced this book to provoke further debate on and around the issues that have emerged from the discussions to date. Although there is much to value in the West of England, the present situation cannot continue: our national and international competitiveness is not as good as it could be; substantial pockets of deprivation remain endemic; the lives of successive generations are being damaged and impoverished by inequality; housing demand far exceeds supply; the natural environment is under threat from ill-considered development; and social cohesion is at risk. Doing nothing is not an option for those who value a city-region as beautiful and productive as this one.

The 2050 vision takes its inspiration from a landmark publishing event of a century ago when a group of far-sighted businesspeople commissioned a comprehensive future plan for their city-region. The 1909 *Plan of Chicago* captured the spirit of its time and the character of a place that dreamed the impossible and often accomplished it.<sup>9</sup> The plan did not invent new solutions to all of the region's problems; some were excluded as beyond its scope, while others were incorporated from other plans. What it did do was offer a brilliant blueprint which provided a clear sense of direction for the development of modern Chicago, one of the most prosperous cities in North America.

The driving force behind the creation of Chicago's plan was architect Daniel Burnham, working with his associate Edward H Bennett, editor Charles Moore and the 334 individual subscribers to the Commercial Club of Chicago. Together, they not only conceived the plan's content but, just as importantly, promoted it extensively and effectively to business, civic and government leaders and even to school children. This approach ensured

Opposite: Participants at a South Bristol Economic Study workshop (Business West).

Overleaf: Plates from *Plan of Chicago* (1909) showing existing and proposed boulevards, streets, parks, playgrounds, railway lines and stations in the city centre and an artist's impression of a proposed boulevard connecting the North and South sides of the river. Burnham and Bennett envisioned Chicago as the 'Paris of the Prairies'.

the proposals were understood and endorsed by a wide range of stakeholders. Successful developments that can be attributed to the work of Burnham and his colleagues include Chicago's impressive North Michigan Avenue and Wacker Drive, spectacular lakefront parks and beautiful regional forest reserves.

Clear parallels can be drawn between the development of *Plan of Chicago* and the challenges to be faced in the West of England. Many of the reasons why the business community took action in Chicago are relevant to this city-region. The key points to be made are:

- Acting locally on issues that are inherently city-regional will jeopardise economic competitiveness and quality of life.
- A strong city-region requires communities that co-operate on issues that transcend local political boundaries.
- Local governments can give up a little in order to get back much more: a city-region that is attractive and prosperous.
- The city-region's governments, businesses and residents must be able to make the kinds of informed choices that will ensure the region is attractive and economically competitive ten, 50 and 100 years from now.

The 2050 vision for the West of England, as provisionally outlined in this book, goes beyond existing and planned strategies, utilising the best of them but setting them into a longer time frame where the emphasis is on sustainable growth and the development of the whole city-region as a flourishing economic unit. It is an invitation to the

government and to all decision makers in the city-region to work together to make this a more successful and economically vibrant area, to contribute more to the UK economy and to provide a place where people want to live and work. Rather than piecemeal, poor-quality, short-term solutions, a coherent, unified approach with a mixture of strategic quick-wins and longer-term, larger-scale projects is required to manage and exploit expected growth. Underpinning the vision is the desire to create a place where there is equality of opportunity, where poverty is eradicated and where educational underachievement is wiped out. Nothing less would be acceptable.

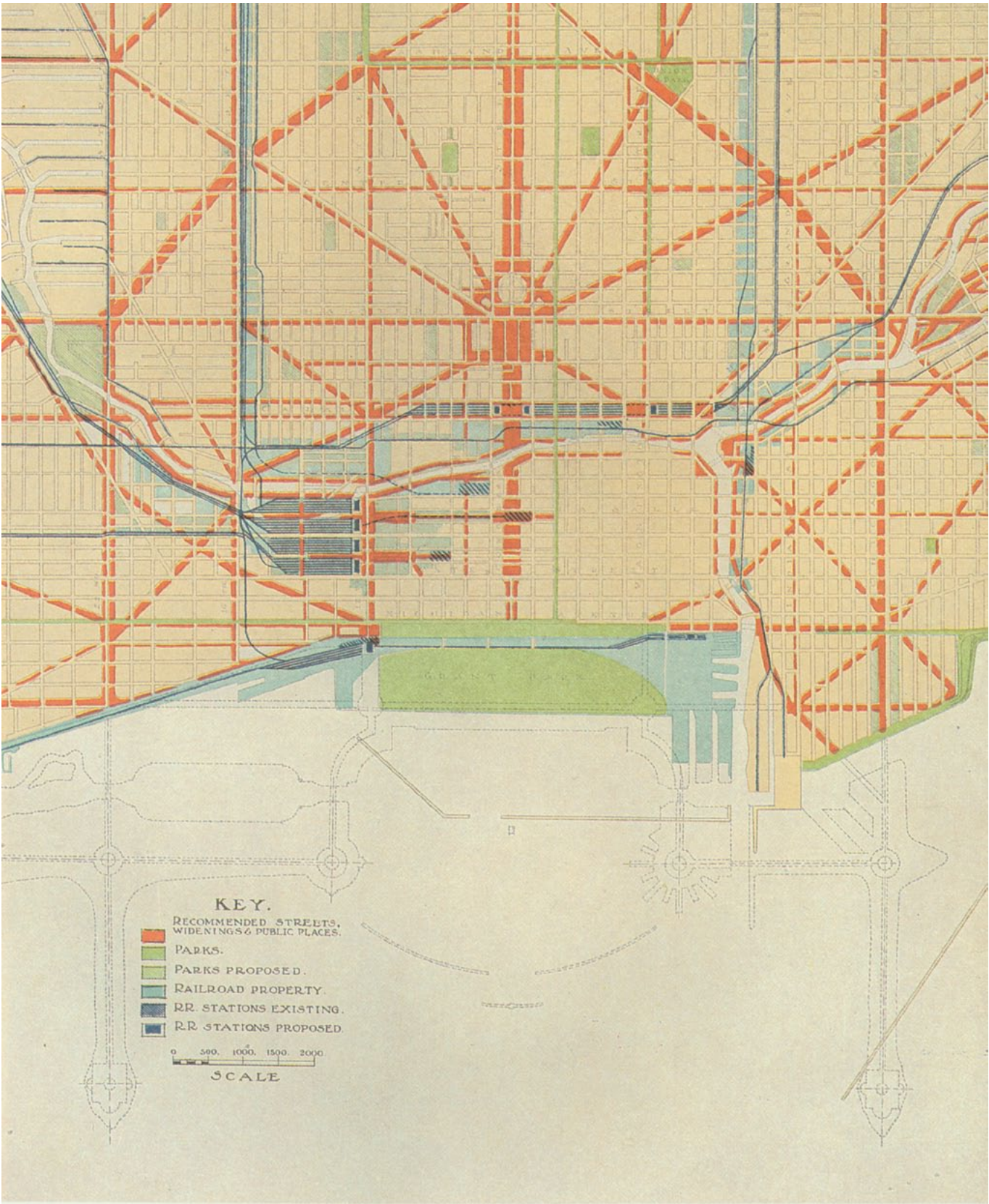
The West of England forms a natural economic zone and should be seen as a good example of a European city-region.

It is the most productive place, as measured by Gross Domestic Product (GDP) per working person, in England outside London. It consistently features in the top 50 European cities as measured by GDP, hovering around 34th position.<sup>10</sup> However, its GDP is only 40 per cent of the level of Frankfurt's (ranked at number one) and the challenge is to increase both the level and the quantum of the output.

There are about 521,600 people from a population of 1,082,100 who are working and they achieve an annual combined Gross Value Added (GVA) of £25.54bn.<sup>11</sup> Unemployment levels are comparatively low, but the territory contains large pockets of persistently poor areas, from the central part of Weston-super-Mare through a large tranche of South Bristol to particular sections of Bath & North East Somerset.

Employment availability is good in the northern section and poor in the south; there is a clear imbalance in the location of jobs and distinct difficulties in achieving access to the north from the south and west. Public transport is not effective and high charges limit access by the poorest people.





COPYRIGHT, 1909, BY COMMERCIAL CLUB OF CHICAGO

CXI. CHICAGO. PLAN OF THE CENTER OF THE CITY, SHOWING THE PRESENT STREET AND BOULEVARD SYSTEM. The proposed additional arteries and street widenings (orange); the present parks (green); and proposed new parks and playgrounds within present shoreline (hatched green); the present railway properties, lines, and stations, and the proposed new stations arranged on a circuit boulevard (dark blue).



COPYRIGHT, 1909, BY COMMERCIAL CLUB OF CHICAGO

CXII. CHICAGO. PROPOSED BOULEVARD TO CONNECT THE NORTH AND SOUTH SIDES OF THE RIVER; VIEW LOOKING NORTH FROM WASHINGTON STREET.

The boulevard is raised to allow free flow of east-and-west teaming traffic under it, and both Michigan Avenue and Beaubien Court are raised to the boulevard level. The raised portion throughout its entire length, from Randolph Street to Indiana Street, extends from building line to building line. It is approached from the cross streets by inclined roadways or ramps; these may be changed to the east side or omitted.

Painted for the Commercial Club by Jules Guerin.





However, the territory as a whole is an attractive place to live and offers distinct advantages to businesses that locate within it. The city-region's natural geography and topography are an important part of this, as is the broader hinterland with its wide variety of beauty, interest and recreational opportunity.

Proximity and ease of access to London and Cardiff are important plus factors and the busy local international airport offers some excellent connections to key European cities and regions. The Port of Bristol thrives and expands, offering a unique and timely direct distribution connection to the majority of the UK population.

Above all, it is a place that has a natural tendency to attract inward migration. It has a consistent historic growth rate that can confidently be expected to continue. By 2030 the million people will have increased to 1.25 million and by 2050 to 1.5 million.

It is the challenge of managing this inevitable growth so that it does not create haphazard effects or further aggravate imbalance that provides such a great opportunity for currently disadvantaged sections of the population and for the wider prosperity of the UK as a whole.

A vision for growth that leads to a more even spread of jobs across the territory, sells the attractiveness of available space and its functional organisation to investors and enterprises from elsewhere and creates a physical stock of amenities and essential services that are connected by a truly efficient public transport system would be the basis for achieving substantial growth in GDP and ensuring an equitable distribution of its beneficial effects. In fact the city-region could achieve a condition of zero poverty for its population.

The gainful employment of the 126,500 people currently excluded from productive economic activity, together with the effect of 200,000 or more other new jobs over the next 40 years, will add about £16bn GVA per annum.<sup>12</sup> The efficiencies gained by imaginative planning of spatial use and its connectivity would also, by definition, raise the level of output per head. The target to aim for is the GDP of Frankfurt and the other European cities occupying the top of the productivity list.

Growth, both economic and of population, requires the availability of space. Land for building employment spaces and extra housing for incomers, and also to facilitate a concerted solution to the persistent supply-and-demand deficit, must be allocated and planned in accordance with a coherent spatial picture for the future. The backbone of affordability will be the judicious use of lower-quality green space with an appropriate levy taken from the certain uplift in land values. This would form the basis for funding essential leisure amenities, education and training facilities, transport and utility infrastructure and the provision of an annuity that

Above: Bristol Harbour Festival, 2008 (Destination Bristol). The festival is promoted as the city's biggest cultural event and one of the biggest free festivals in the country.

Opposite: ss *Great Britain*, Bristol (ss *Great Britain* Trust, photographer Mandy Reynolds). The ship returned to Bristol from the Falklands in 1970 and is now one of the city-region's most popular visitor destinations. Since 2010 the dockyard site has also been home to The Brunel Institute, a world-class education and conservation centre.







Entrance to the Tobacco Factory theatre, Bedminster, 2010 (© Anthony O'Neil under the Creative Commons Licence <http://is.gd/TNEWIh>). The theatre, its café/bar and the variety of independent shops on North Street have contributed to the regeneration of Bedminster, which had suffered from wartime bombing, post-war redevelopment and the closure of the Wills factory.

would allow the subsidy of a truly public transport system. The efficiency of frequent, comfortable and attractive modes of mass transit will create the revolutionary effect on the way people get around and on the reduction of wasted and lost travel time that our future happy survival demands. The contribution from this alone to general environmental improvement could be deemed priceless.

The penalty for failing to have a vision would be a shameful and continuing waste of potential and the maintenance of gross inequities for a significant proportion of the population. If the powers-that-be maintain a Canute-like stance to the rising tide, resisting the clear need for a coherent, underpinning master plan, there will be unplanned and opportunistic development of the type



that blighted the place in the second half of the twentieth century. Bradley Stoke is the classic example of this in the built environment, but the persistent failure to construct and apply innovative solutions to the challenges of education for the young, training for developing adults and enlightenment for all is closer to the core of the problem that has prevented the optimal development of that and other communities. Exacerbation of the gap between the fortunate and the disadvantaged will cause civil unrest and in the end it is always the poorest in our society who pay the highest price.

Following this introduction the book is divided into three main sections. The first provides a brief history of the city-region to date in the form of a timeline setting out how the West of England has grown from its medieval origins and acknowledging the historic foundations – social and cultural as well as spatial – on which the future must be built. The second explores the present-day situation in relation to various key themes that will shape the future, identifying what makes the West of England special, what is good now and where problems and challenges lie. The third provides some initial thinking about the desired future vision, outlining projects that need immediate attention as well as longer-term initiatives. The book concludes with a challenge to bring this vision to fruition.



The ideas contained in this book will evolve as further consultation takes place and further supporting data is collected. This is a business vision intended to engender debate and raise aspirations. It is not intended to provide *the* answer to the challenges we face but to illustrate ideas and opportunities that could lead to a better future for all with positive planning and foresight.

Details of how to submit feedback and suggestions prompted by your reading and by the overall 2050 initiative can be found on the 2050 website at [www.bristol2050.com](http://www.bristol2050.com). The site also contains various background papers. We welcome all contributions.



The newly opened pier at Weston-super-Mare, 2010 (Destination Bristol). Although best known as a resort town, Weston was the site of a wartime shadow factory and after the war the council encouraged Bristol Aeroplane Company to base its prefabricated housing and helicopter divisions there as part of a scheme to broaden the local economy.

Crowds attending the Keynsham Music Festival, 2010, a free event showcasing local unsigned bands (© Keynsham Town Council). Keynsham is set to experience significant change as key sites including Somerdale and the Town Hall are redeveloped.



# The West of England City-Region: Where we have come from

The West of England city-region has developed through a combination of long-term planning, short-term opportunism and chance. It has been shaped by its natural environment; by local, national and international events; by altruistic and inspirational individuals and organisations as well as self-serving and mediocre ones; and by the day-to-day lives of its people. This historic legacy informs the development of our future vision: building on successes, learning from mistakes, effecting change where needed, preserving what is of most value, striving to work successfully within our limits, understanding the processes by which big ideas come to fruition.

Aerial view of Bristol by  
J Lavars, 1887 (detail)  
(Bristol's Museums, Galleries  
and Archives).



Our timeline begins in the 1200s, when Bristol was already established as the region's commercial centre. It had been built on a well-drained knoll at a crossing point of a navigable waterway (the junction of the Rivers Frome and Avon) within reach of abundant grazing and agricultural land, building materials and fuel and enjoying a generally mild climate.

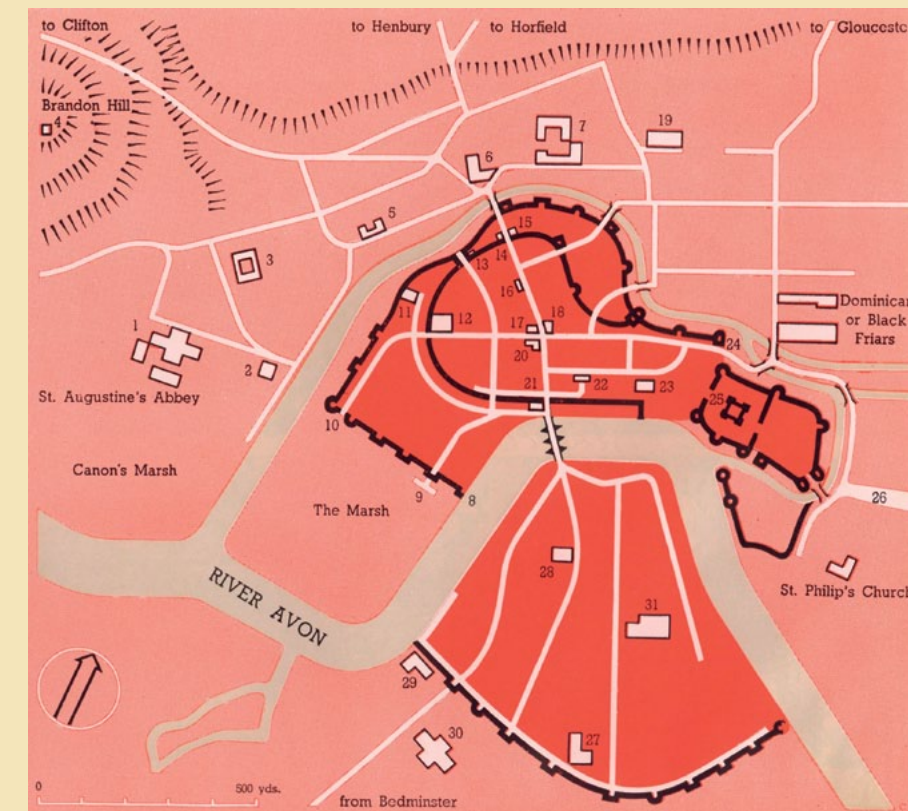
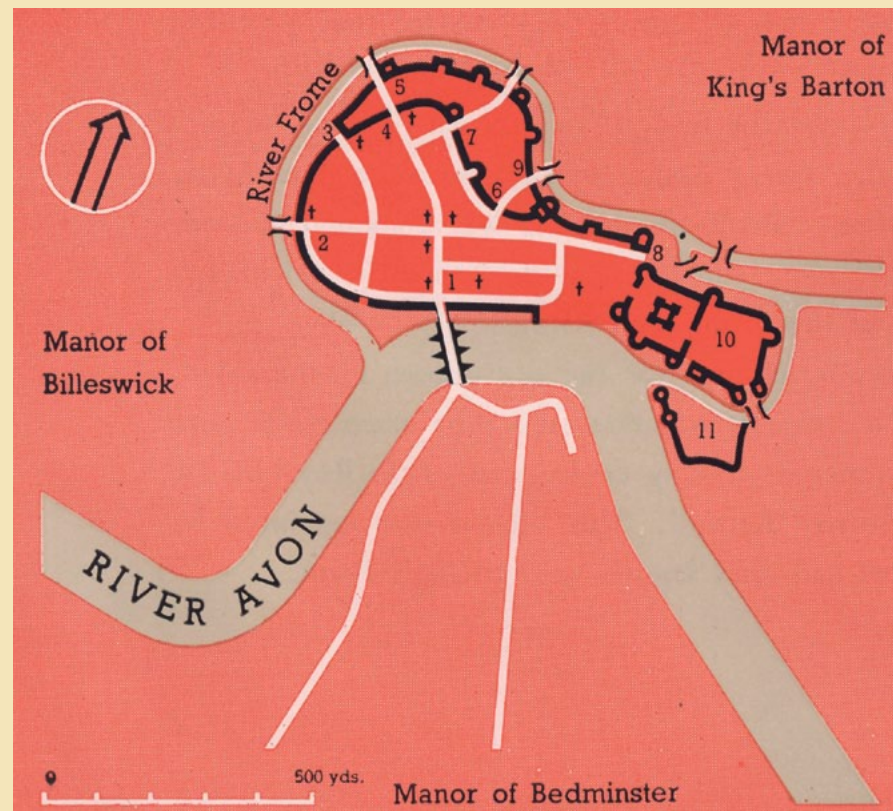
It was close to the old Roman roads of the Fosse Way (linking Lincoln to Exeter) and the Via Julia (from London to Sea Mills via Bath) and to the post-Roman defensive Wansdyke earthwork. Bristol still dominates the West of England physically and economically because of its size, wealth and strategic position, but seeks to work in partnership with others to maximise the potential of the city-region as a whole.

Bath (Aquae Sulis) had been the only significant Roman settlement in the region. Its main industry in the medieval period was the manufacture of woollen cloth, but its economy would later be dependent upon those seeking to benefit from the health-giving properties of its

hot springs that, legend has it, were first discovered by Bladud around 860 BC. It is still a popular visitor destination but now also promotes itself as a centre of expertise in information, communication and environmental technologies and in creative industries. Sub-regionally it is closely aligned with the market towns of Keynsham, Midsomer Norton and Radstock.

Aside from Bristol and Bath and a few small villages and scattered hamlets, most of the city-region in the 1200s was rural – a mixture of farmland and untamed nature. The urban areas have expanded steadily over time, with more rapid development following industrialisation, but much of the West of England is still green

space. The 2050 vision seeks to bring cohesion to the management of the entire infrastructure: the green, blue, brownfield and built environments, the historic and the modern, the spatial, the economic, the social, the political and the cultural.



Maps of Bristol in about 1200 and 1248 showing the expansion south of the river and the new course of the Frome around The Marsh (reproduced from *English City: the Growth and the Future of Bristol* published by J S Fry and Sons Ltd, January 1945).

1200s



- 1216

First Bristol mayor appointed.
- 1239

Start of an impressive, seven-year engineering project to divert the River Frome at Bristol to increase the number of quaysides and provide deeper berths.
- 1248

Start of the first major expansion of Bristol south of the river with the replacement of the old wooden bridge across the Avon with a stronger, stone one, lined with shops. The suburb of Redcliffe becomes an important manufacturing hub.
- 1373

Bristol is granted county status and the first proper town council is formed.
- 1450s

Continuing growth in wealth and influence of the merchant class, which endows some of Bristol's first schools, almshouses and hospitals, supports employment and education initiatives and increases investment in speculative ventures to find profitable new commodities, materials and markets.
- 1497

Explorer John Cabot departs from Bristol on a voyage that will lead to the first European landing at Newfoundland.
- 1539

Ownership of Bath's hot-spring baths and hospitals is passed to the Corporation following the dissolution of the monasteries. The facilities are developed as a significant source of income.

- 1542

Bristol is formally granted city status and made a Bishopric.
- 1590

Queen Elizabeth I grants a Charter of Incorporation to the City of Bath.
- 1650s

Start of production of delftware at the Brislington Pottery, one of the important economic specialisms of the city-region that have since been lost. The pottery industry was dependent on fuel supplied from the local coalfields and on clay and claystone dug from local pits.



Maps of Bristol's trade links in about 1200 and 1500 showing the development of international connections (reproduced from *English City*).

1200s

1400s

1500s

- 1653

Bristol's second sugar refinery opens on what is now the site of Colston Hall. By the mid-eighteenth century there were about 20 refineries in the city using products brought back to the city on the last leg of the Triangular Trade.
- 1654

Bristol Castle is destroyed on the orders of Oliver Cromwell. The area on which it stood is used for housing as part of a major building programme.
- 1676

The hamlet of Clifton is purchased by the Society of Merchant Venturers and later developed as a middle-class city-suburb providing an escape from inner-city congestion and pollution.
- 1698

The Society of Merchant Venturers breaks the monopoly of the Royal African Company so its members can engage legally in the highly profitable slave trade.
- 1700s

A Golden Age for Bristol: the population trebles, civic pride is high, manufacturing and dockside activity are booming, new roads are constructed and areas of the city centre are rebuilt, often in modern brick rather than traditional stone.
- 1705

Beau Nash is appointed Master of Ceremonies for Bath's social activity.
- 1730s

Rhenish and Flemish brassworkers are encouraged to come to Bristol to share their expertise – an example of the positive benefits of immigration in stimulating the economy.<sup>1</sup> The brass industry was fed by the calamine mines of the Mendips.
- 1766

The Theatre Royal opens in Bristol off King Street, a venture initially funded by a partnership comprising 50 merchants, lawyers and politicians. It is now home to the Bristol Old Vic.
- 1777

Fry's chocolate factory opens at The Pithay in Bristol and becomes a major employer for the city-region.



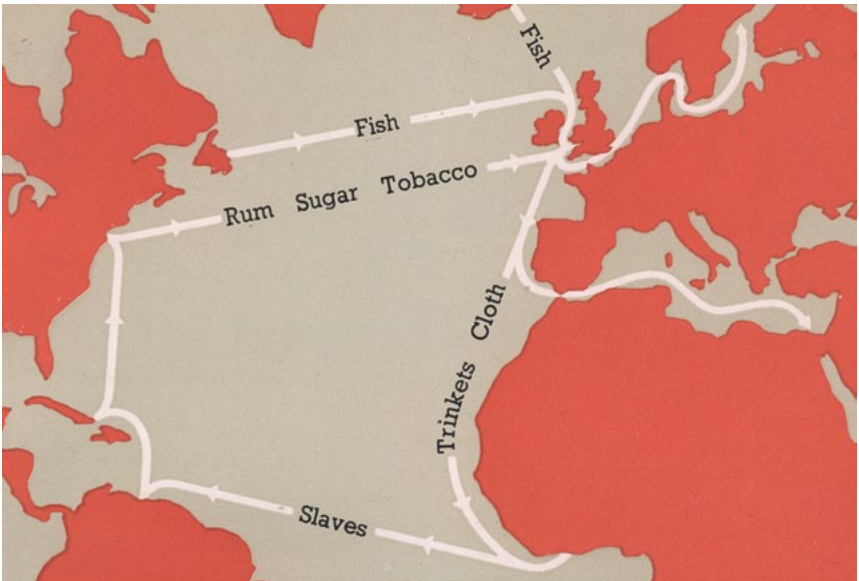
Georgius Hoefnagle's plan of Brightstowe, 1581 (University of Bristol Library, Special Collections). The plan, which uses one of the early names given to Bristol, was reproduced in Georg Braun and Franz Hogenberg's *Civitates Orbis Terrarum* (1572-1617), the first published collection of city views from around the world.

1600s

1700s

1700s





Map of Bristol trade links in around 1750 showing what was transported on each leg of the trade between Bristol, Africa, the Caribbean and North America (reproduced from *English City*).

### The Slave Trade Legacy

The British slave trade ended in 1807, with full emancipation in the colonies following in 1838. Abolition wiped out what remained of Bristol's interests in the trade, but this had already been in decline as a result of the disruption of the American War of Independence (1775-1783), wars with France and competition from Liverpool. By the early 1800s, Bristol had slipped in the rankings: it was England's sixth city and eighth-largest port, having been third and second respectively a century before.

Many across the city-region grew rich from investments in slave-worked colonies and in the lucrative Triangular Trade. This continues to be a contentious issue for some and there are regular calls for a meaningful apology to be made, though as yet there is no agreement on what form this might take. After the Second World War, thousands of Afro-Caribbeans, most of them descended from enslaved people, were encouraged to migrate to Britain to help with the post-war rebuilding programme. In Bristol, many settled in St Paul's, a formerly prestigious district that had suffered from blight and was allowed to decay further by unscrupulous landlords who knew their tenants were unlikely to find accommodation elsewhere in the city.

Membership of the present Society of Merchant Venturers is by invitation.<sup>2</sup> It plays an active role in several local charities with a particular focus on young people, education, enterprise and entrepreneurship and caring for the elderly, continuing some of the philanthropic responsibilities first taken up by the merchants in the 1500s.

### The Influence of Queen Anne

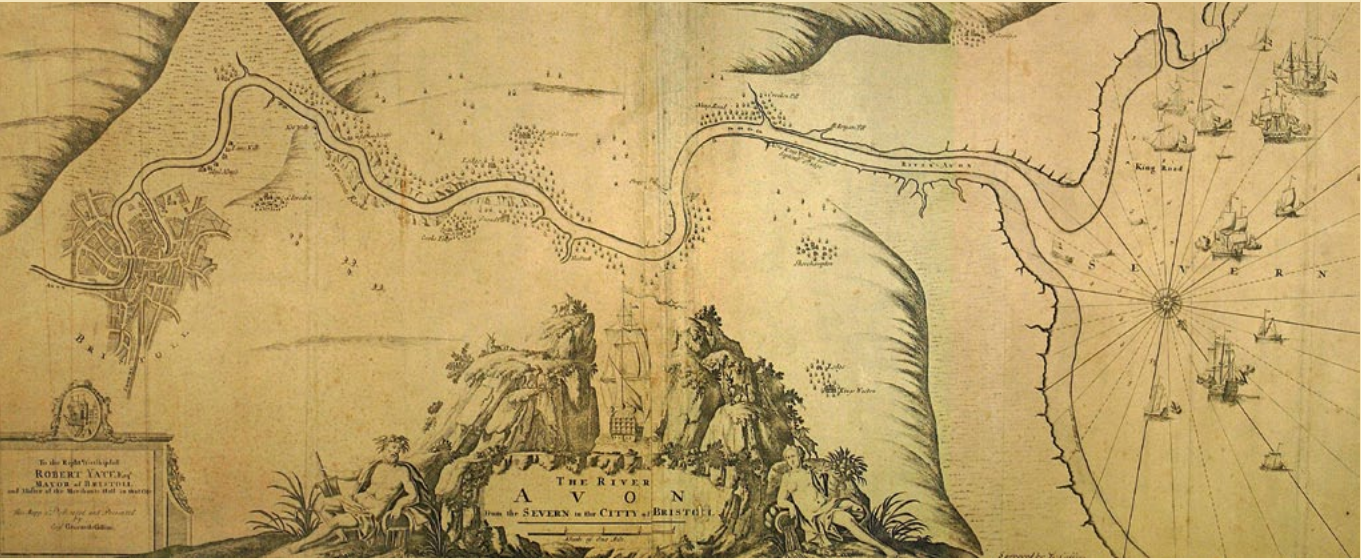
In the late seventeenth century, The Marsh to the south-west of Bristol's city walls was developed as Queen Square, one of the largest residential squares in Europe. It was named in honour of Queen Anne when she visited the city in 1702. The queen is also credited with inaugurating the development of neighbouring Bath as a seasonal spa resort with new residential streets and public buildings constructed in the attractive local stone. She had visited the baths in 1688 seeking a cure for her gout. The Romans had built the first baths to exploit the city's natural hot springs around 70 AD, but the waters had been used for medicinal purposes since at least Celtic times.



Top: *Queen Square from the North West Corner*, Thomas L. Rowbotham, 1827 (Braikenridge Collection: Bristol's Museums, Galleries and Archives). This was later the scene of the 1831 riots.

Bottom: Lansdown Crescent designed by John Palmer during the later stage of Bath's development as a planned city – progress which was halted by the national recession and the collapse of the city's banks in the 1790s.

- |  |  |   |
|--|--|---|
| <p><b>1780s</b> Nonsuch Flint Glass Manufactory starts production in Bristol – another specialist industry of the city. The last working glass house closed in 1923.</p>   | <p><b>1796</b> Harvey's wine business is founded. Wine had been an important trading good within the city since the medieval period. The Grand Pump Room is completed in Bath.</p> | <p><b>1810</b> The Kennet &amp; Avon Canal is completed and used to transport coal, cloth, agricultural produce and other regional goods from Bath to London.</p>   |
| <p><b>1785</b> Stothert ironworks is established in Bath.</p>  | <p><b>1798</b> The publication of <i>Lyrical Ballads</i> in Bristol marks the start of the English Romantic movement.</p>  | <p><b>1815</b> John Loudon McAdam is invited to be General Surveyor to the Bristol Turnpike Trust. He pioneers the macadamising of roads, which improves year-round transport connections in the city-region. He is appointed Surveyor of Bath roads in 1826.</p> |
| <p><b>1793-1797</b> The War of the First Coalition against the French leads to the bankruptcy of many of the city-region's merchants and property speculators, bringing several prestigious building projects in Bristol and Bath to a halt.</p> | <p><b>1800s</b> Bristol is increasingly outpaced by the growth of the new industrial cities of Birmingham, Manchester and Liverpool.</p>   |   |
| <p><b>1809</b> The completion of the New Cut and the non-tidal Floating Harbour at Bristol in a long-delayed attempt to improve access to the docks.</p>   |  | <p><b>1823</b> Bristol Chamber of Commerce is formed.</p>   |



Seventeenth-century map of the Avon (University of Bristol Library, Special Collections). The limestone Avon Gorge provided the docks with natural protection from the prevailing south-westerly winds, as well as from maritime invaders attempting to travel up the river from the Severn Estuary. However, among the problems faced by ships' pilots were the Avon's unusually wide tidal range, its strong currents, the unreliable winds around the river bends and the narrowness of the Gorge. The wide tidal range also meant that loading and unloading in the city docks could be particularly challenging.



**1831** Riots in Bristol lead to the collapse of business confidence in the city and work on Brunel’s Clifton Suspension Bridge comes to a temporary halt.

**1835** The first major extension of Bristol’s boundary since 1373. A horse-traction railway is in operation between Bristol and Gloucestershire. It is credited with reducing the cost of coal in the city and is soon converted to steam locomotion.

**1836** Bristol, Clifton and West of England Zoological Society Gardens opens to the public. It is the world’s oldest zoo not in a capital city.

**1837** Brunel’s PS *Great Western* is launched at Bristol.

**1840** Brunel’s Great Western Railway connects Bristol to Bath.

**1841** Brunel’s Great Western Railway Bristol-London route is completed.

**1842** Bristol & Exeter Railway connects Bristol to Taunton, with a branch line to Weston-super-Mare.

**1843** Brunel’s ss *Great Britain* is launched at Bristol, but the city’s aspiration to be a major transatlantic steamer terminal is thwarted by continuing access problems along the Avon and into the docks.

**1848** Bristol becomes a Free Port, owned by the Corporation.

**1850s** The increasing mechanisation of agriculture reduces the level of rural employment in the city-region and more people migrate to the towns and cities.

**1857** Rupert Street in Bristol is created by culverting the River Frome – an indication of the need to increase space for road traffic in the city-centre at the expense of the docks.

**1863** Work begins on the Bristol & North Somerset Railway; the Bristol & South Wales Union Railway (including a ferry service) is opened.

**1864** Clifton Suspension Bridge opens.

**1866** The first Wills tobacco factory is built in Bristol. The company would become one of the city’s biggest employers.

**1874** Bristol Tramways Company is formed.

**1876** University College Bristol is founded.

**1877** New docks are completed at Avonmouth.

**1879** New docks are completed at Portishead.

**1884** New docks are brought under Bristol Corporation’s control as the city docks continue to decline.

**1885** Bristol Trade and Mining School becomes known as Merchant Venturers’ School.

**1892** Uniform railway gauge is implemented throughout the South West to match the rest of the country.

**1895** Bristol tramways are electrified.

**1902** Bath Chamber of Commerce is formed.

**1907** The Portishead extension of the Weston, Clevedon & Portishead Railway is opened.

**1908** The deep-water ocean terminal Royal Edward Dock is completed at Avonmouth.

**1909** The University of Bristol gets its Royal Charter.

**1910** The founding of the Bristol Aeroplane Company.

**1917** Mustard gas production begins at Avonmouth and forms the basis of its post-war development as a centre for the chemical industry.



Above: A hundred years after it opened, the Kennet & Avon canal is now mainly used by leisure craft and houseboats. The financial crisis of the 1790s meant ambitious plans to develop the city-region’s canal system were largely abandoned and Bristol lost ground to Liverpool, which had access to an extensive network of waterways (natural and man-made) that connected the port with major distribution points in the Midlands and the North. Despite the coming of the railways, coastal and inland waterways continued to be the cheapest and most efficient means of transporting bulky and heavy goods in many areas until well into the twentieth century.



Opposite and left: Ordnance Survey maps showing the extent of urban Bristol and Bath in 1899 (© Crown Copyright).

1800s

1800s

1800s

1800s

1900s

1900s





The chaos of transferring between gauges at Gloucester, 1846 (University of Bristol Library).

### Brunel’s Railway

With the convenience and reliability of the railway, parts of the West of England experienced a significant boost in economic activity. Nineteenth-century Bath, for example, was able to develop its industrial sector as well as its longstanding health and leisure businesses. Train travel also established the fortunes of the seaside resort of Weston-super-Mare. However, Brunel’s adoption of the broad rather than standard gauge meant that for decades the region lacked uninterrupted access to the national rail network, unlike its rivals in the North and Midlands.

The coming of the railways necessitated uniform timekeeping across the country, with local Bristol time – ten minutes behind that of the London – being replaced by Greenwich Mean Time.

Today, Great Western Mainline, which follows Brunel’s original route for much of its length, is one of the UK’s busiest rail corridors, serving a population of around 4.5 million in South West England and South Wales. It has an economic output of around £92bn.<sup>3</sup>



New home at Sea Mills estate, c 1938 (reproduced from *English City*).

### Garden Suburbs

In the early twentieth century, the number of residents declined in the old parishes at the centre of Bristol as the areas were transformed into business districts. During the post-war slum clearances, the remaining city-centre residents were encouraged to move to new, local-authority housing on the suburban fringes such as the Sea Mills Municipal Estate, north-west of the city. Inspired by Sir Ebenezer Howard’s garden city movement, the new planned estates emphasised quality, health, domestic well-being and affordability.

Other areas that were originally planned as garden-suburbs for the city, providing homes fit for returning war heroes, included Knowle West, Horfield and Shirehampton. The main disadvantage of these new estates was that they had insufficient shops and services for at least the first few years of occupancy and were inconvenient for those still employed in the city and dependent on public transport.

These shortcomings were repeated in some of the housing developments that followed the Second World War, when large council estates were built on greenfield sites at Southmead, Lockleaze, Lawrence Weston and Hartcliffe. They shared with the pre-war estates a lack of local amenities and limited public transport, but later projects suffered further from the abandonment of the garden-city principle which had been a redeeming feature of the earlier developments. Inns Court at Knowle West, for instance, built in the 1960s, replaced the conventional street grid pattern with short cul-de-sacs accessed from a circuitous feeder road, a system that is now felt to cause poor legibility and permeability and to contribute to isolation rather than the hoped-for community interaction.<sup>4</sup>



### Early Twentieth-Century Industry

At the turn of the century, Bristol’s traditional shipbuilding was in decline but thriving activity in and around the city centre included the manufacture of soap, lead, brick, chemicals, sheet-metal, timber and varnish. At this time, neighbouring Bath had brass foundries, a printing works and bindery, cabinet makers, a manufacturer of cranes, a corset factory and a bottling plant for mineral water, among other successful businesses. Bath’s health and leisure industry had been re-energised by the discovery of the original Roman baths in the 1870s. The city was served by two railway companies: the Great Western Railway using Bath Spa station (still in operation) and the Midland Railway using the station at Green Park (closed under the Beeching proposals of 1963 and now managed by Ethical Property as a space for local ethical businesses and organisations).

Filton, a small, rural community on the Gloucestershire (now South Gloucestershire) border, became home to the British aviation industry with the founding there in 1910 of the British & Colonial Aeroplane Company, later trading as the Bristol Aeroplane Company (BAC). The presence of the rapidly growing factory, along with its associated supplier industries, was a significant driver for change and led to the strategic growth of the North Fringe. Filton had been the northern terminus of the Bristol tramway system, which was owned by Sir George White, BAC’s founder. BAC’s engine division eventually moved from Filton to Patchway.



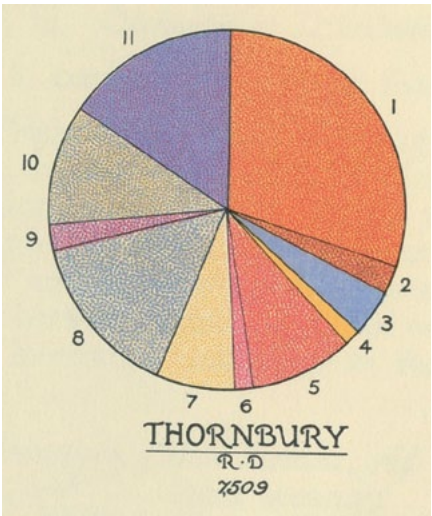
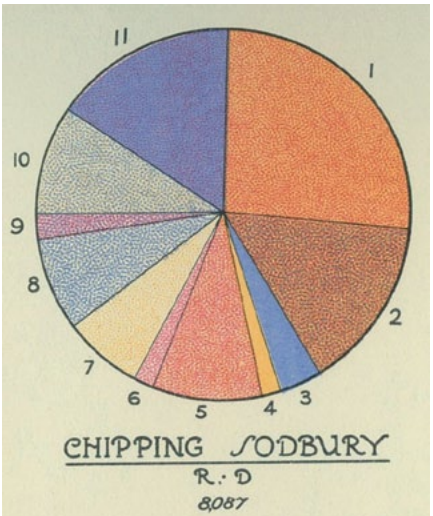
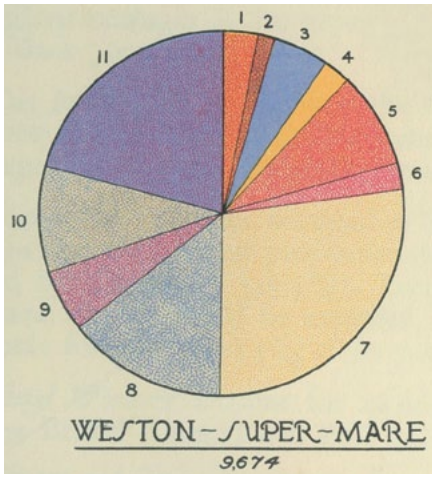
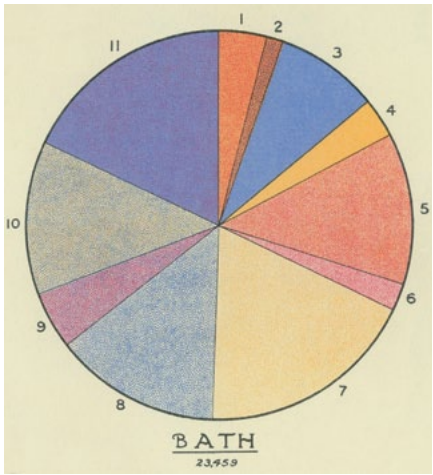
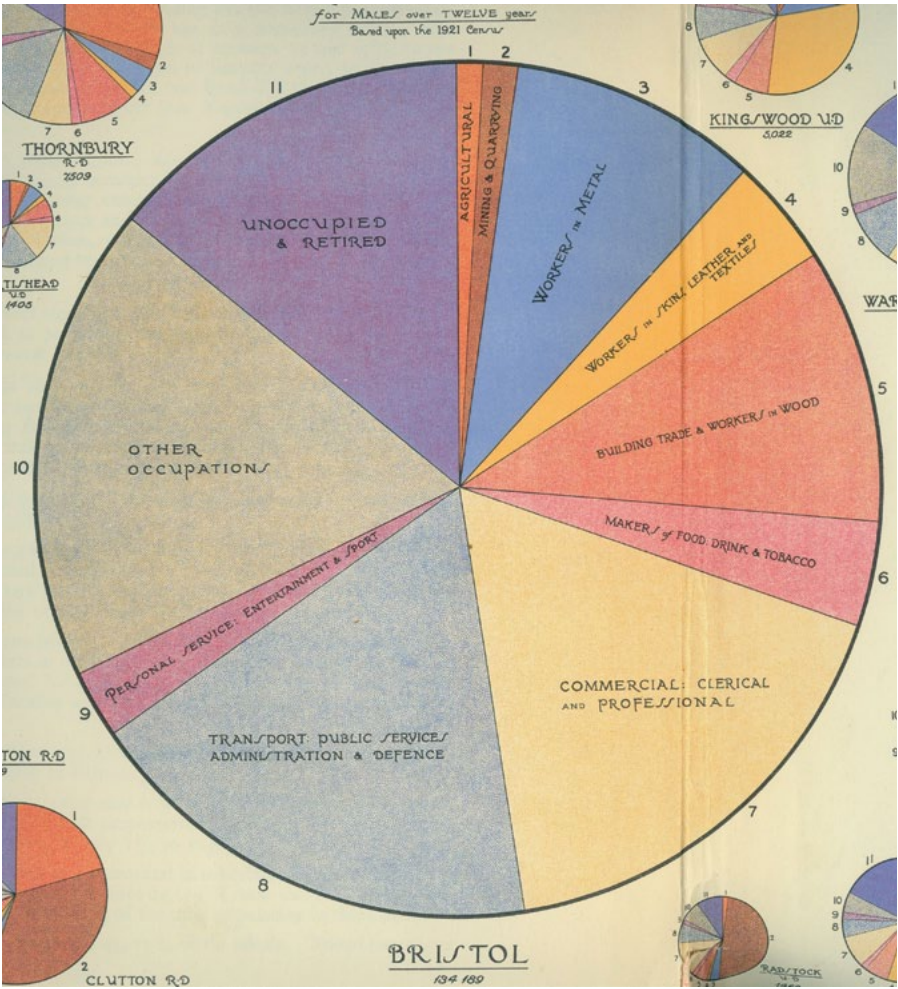
Stothert and Pitt crane built at Bath in 1951 and installed on Bristol’s Prince’s Wharf (Destination Bristol, photographer Graham Flack). The company is now part of the Clarke Chapman group.



Aerial view of the aviation works at Filton in 1916, left (Bristol Aero Collection) and circa 1939, above (Airbus).



Employment Charts



REFERENCE		
AGRICULTURAL	1	
MINING & QUARRYING	2	
WORKERS IN METALS	3	
WORKERS IN SKINS, LEATHER & TEXTILES	4	
BUILDING TRADE & WORKERS IN WOOD	5	
MAKERS OF FOOD, DRINK & TOBACCO	6	
COMMERCIAL, CLERICAL AND PROFESSIONAL	7	
TRANSPORT, PUBLIC SERVICES, ADMINISTRATION & DEFENCE	8	
PERSONAL SERVICE, ENTERTAINMENT & SPORT	9	
OTHER OCCUPATIONS	10	
UNOCCUPIED & RETIRED	11	

Employment charts for males over 12 years old in some of the larger population centres of the city-region based on the 1921 census (reproduced from *Bristol and Bath Regional Plan* prepared for the Bath and Bristol District Joint Regional Planning Committee by Patrick Abercrombie and Bertrand Brueton, 1930).

**1919** Construction of the Hillfields Park Estate begins – Bristol’s first municipal housing project under the National Housing Scheme. The development was expanded in the early 1920s when the packaging company Elisa Smith Robinson built homes to accommodate workers employed at its new paper and printing works at Fishponds.

**1926** Avonmouth is linked directly to Bristol city centre via the four-lane section of the A4 known as The Portway, originally planned as a two-lane road with a central reservation for a high-speed tramway.

**1927** Weston-super-Mare Winter Gardens and Pavilion are opened.

**1930** The publication of *Bristol and Bath Regional Plan*, which recommended, among many other things, a new Severn Bridge, a coastal road and ring roads around Bristol. As part of the plan, Bristol’s Inner Circuit Road from Temple Meads to The Centre and part of a ring road from Patchway to Westbury were completed in less than ten years, but further developments were stopped by the outbreak of war in 1939.

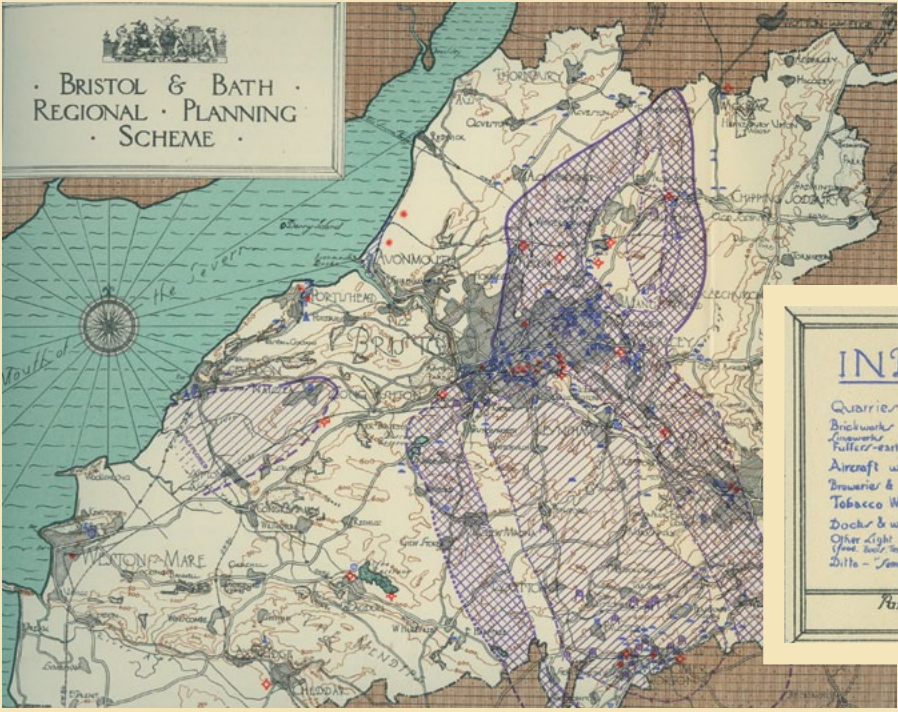
**1930s** The completion of Fry’s move from a congested inner-city Bristol site to a new factory at Somerdale near Keynsham, with a new housing estate built to accommodate employees.

**1935** The start of the national rearmament programme boosts the city-region’s defence industries.

**1940-** The Winter Blitz in Bristol.

**1941**

**1942** The Baedeker raids on Bath.



Map from the *Bristol and Bath Regional Plan* (1930) showing industrialisation in the city-region at that time. Note the extent of the coal fields, an aspect of the city-region’s former economic life that is sometimes forgotten today.

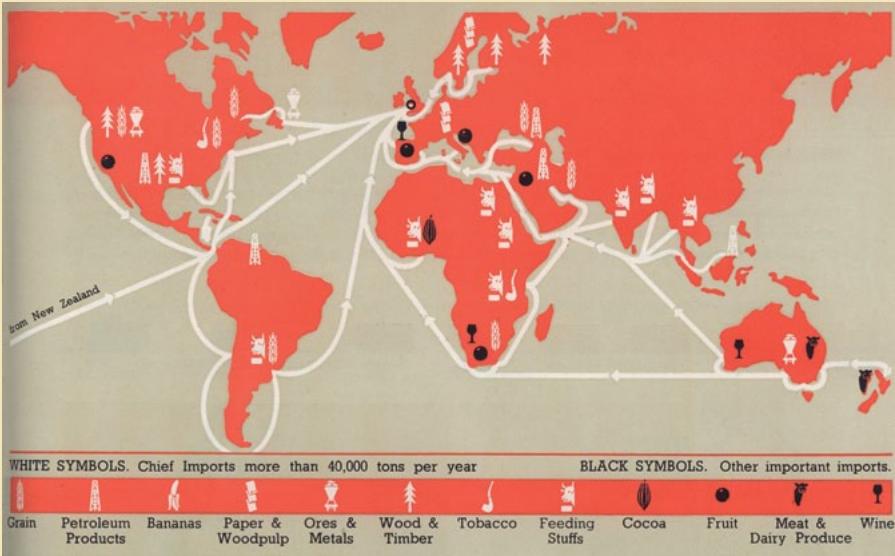


1900s

1900s

1900s





Map of Bristol trade links in around 1939 (reproduced from *English City*).



Photograph of bomb damage in Bristol taken by Jim Facey (Bristol Record Office).



Artist's impression of proposed post-war reconstruction of Bristol Centre from the Western Chapter of Architects, an ambitious vision that, needless to say, was not put into practice (reproduced from *English City*). Although some of the reconstruction that did take place was sympathetic to its surroundings (for example, Park Street), the rush to rebuild was at times accompanied by a modernist style of architecture that was not always appropriate for the setting or executed with adequate quality control. This contributed to the growth of conservation groups.

**1944** The Western Chapter of Architects publishes radical proposals for Bristol city centre. In another plan, J Nelson Meredith, the City Architect, suggests the demolition of 770 acres of the city centre and the introduction of a zoning principle.

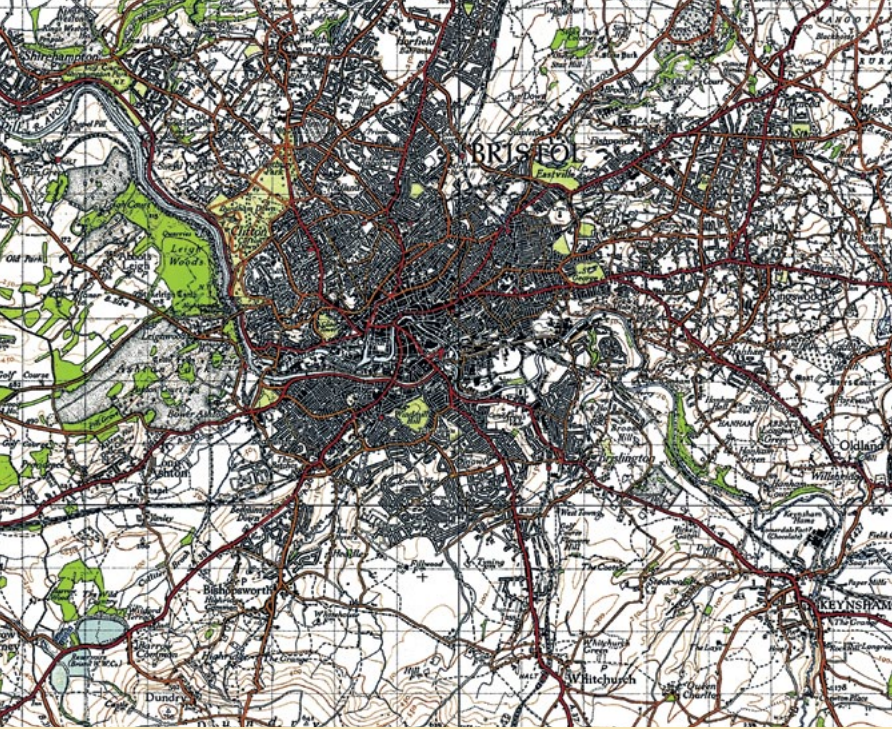
**1948** The Ministry of Town and Country Planning approves the compulsory purchase of land for the building of the new Broadmead shopping centre.<sup>5</sup>

**1952** Various solutions to the growing problem of congestion in Bristol are proposed in the 25-year Development Plan,

the first produced under the 1947 Planning Act. Of the proposed southern ring-road, only Easton Way is completed. Around this time, neighbouring authorities begin the planned extension of Nailsea, Thornbury and Keynsham, but they lack the powers to provide the necessary local facilities, jobs, roads and public transport, leading to social, economic and transport problems.

**1957** The opening of Bristol airport at Lulsgate. The BBC Natural History Unit is founded in Bristol, providing the nucleus for the city-region's excellence in wildlife film-making.

**1965** The publication of the *Future for Bath Plan* by Buchanan and Partners, including a controversial proposal to build a tunnel under the historic city. Barton Hill is completed – one of Bristol's first high-rises – as part of a small-scale, inner-city housing redevelopment programme. The South West Regional Economic Council is formed and encourages large-scale urbanisation of the North Fringe, leading to the growth of Chipping Sodbury, Yate, Frampton Cotterell, Almondsbury and Thornbury.



Ordnance Survey maps showing the extent of Bristol and Bath in 1946 (© Crown Copyright).



**1966** The non-statutory City Centre Policy Report is produced for Bristol. Of its proposals, the M32, Cumberland Basin and parts of the ring road and outer and inner circuit roads are subsequently built, but public objections to the building of the eastern side of the ring road delay its construction by ten years and double its cost. The report also recommends filling in the Feeder Canal and parts of the Floating Harbour. The opening of the M4/M5 interchange at Almondsbury and the first Severn Crossing. Bath University gets its Royal Charter.

**1967** The first St Paul’s Carnival.

**1969** British Concorde’s maiden flight at Filton.

**1971** The Severnside Feasibility Study is published, part of an extensive government study of the UK’s large, un-urbanised estuaries. It provides some useful ideas but is shelved.

**1972** Bristol Parkway station is opened on the London-South Wales rail route.

**1973** The last of the Somerset collieries close. The property crash ends 20 years of development that saw office space in Bristol city centre treble, with significant building projects completed at Lewins Mead, The Pithay and St James Barton.

**1974** The opening of Avonmouth Bridge. Avon County Council is formed, covering the City of Bristol plus parts of Gloucestershire and Somerset. Wills moves cigarette production from Ashton and Bedminster to a state-of-the-art factory in Hartcliffe.

**1975** Bristol city docks close. The M32 link from the M4 to Bristol city centre is completed.

**1976** Aardman Animations moves to Bristol and comes to reinforce the city-region’s reputation as magnet for film-makers and associated supply companies.



River Avon and Avonmouth Bridge, 2010 (© Stephen McKay under the Creative Commons Licence <http://is.gd/NpbwD1>). The improved access brought by the building of the bridge, along with the completion of the Almondsbury motorway interchange, contributed to the growth of Avonmouth as an important centre for chemical and petrochemical industries, warehousing and logistics.

1900s

1900s

1900s

**1977** The last major Bristol shipbuilding company closes. Sustrans is founded in Bristol – an early indication of the city-region’s affinity for sustainable transport and other green initiatives.

**1978** The deep-water Royal Portbury Dock, capable of accommodating ships of 70,000 tons, is opened.

**1980s** Bradley Stoke is developed as a new town, with the familiar lack of facilities and transport provision of previous developments.

**1982** The Wildscreen Festival is founded in Bristol, bringing international film-makers to the city.

**1983** HP Labs Bristol opens ‘at the heart of a vibrant academic, cultural and industrial community that includes British Aerospace, Rolls-Royce, Orange, STMicroelectronics and a number of financial services companies’.<sup>6</sup>

**1987** Bristol Council transfers the assets of the airport to Bristol Airport plc. Bath is designated a UNESCO World Heritage site. An Urban Development Corporation is formed in Bristol and is responsible for the building of St Philip’s Causeway, one of the few road schemes to be completed in this period.

**1988** The Bristol Initiative is formed. Now, as The Initiative, it also covers Bath & North East Somerset and Swindon.

**1990** Wills production transfers from Hartcliffe to Northampton.

**1991** Bath’s Fringe Festival is revived and Bath Mozartfest is founded.

**1992** Bristol Polytechnic becomes the University of the West of England.

**1993** Bristol Cultural Development Partnership is formed.

**1995** The first Brief Encounters Festival in Bristol. Bath Literature Festival is founded.



Railway bridge, Sea Mills, 2010 (© Stephen McKay under the Creative Commons Licence <http://is.gd/iZdtrq>). The bridge carries the Bristol-Avonmouth-Severn Beach railway across the River Trym where it empties into the Avon.

1900s

1900s

1900s



**1996** The Second Severn Crossing is completed. Filton Abbey Wood station is opened to serve the new Ministry of Defence Headquarters for Defence Equipment and Support, furthering the development of the North Fringe as a magnet for employment. The Batheaston-Swainswick bypass is completed, having prompted one of the first major anti-road campaigns of the 1990s. Avon County is disbanded and becomes the four unitary authorities of Bristol, Bath & North East Somerset, North Somerset and South Gloucestershire.

**1997** The publication of the Bristol Local Plan, the first for 20 years.

**1998** Cribbs Causeway out-of-town retail and leisure centre opens.

**1999** The start of the SETsquared partnership, which includes the universities of Bristol and Bath and aims to stimulate economic growth.

**2000s** After a prolonged period of recession in the 1990s, Bristol rallies as the city-region's economic powerhouse.

**2000** A new terminal opens at the rebranded Bristol International Airport. The completion of Millennium Square, Bristol. The reopening of Queen's Square, Bristol after a major regeneration project. The first production of Shakespeare at the Tobacco Factory Theatre in Bedminster.

**2001** The award-winning Bristol Legible City wayfinding and branding initiative is launched. The first Animated Encounters Festival takes place in Bristol.

**2002** Bristol's Capital of Culture 2008 bid is shortlisted to the final six.



Bristol ferry boat passing in front of new housing at Hotwells with traditional terraces behind (Destination Bristol, photographer Graham Flack).



Arnolfini (photographer Jamie Woodley). Arnolfini was established as a centre for contemporary arts in 1961, moving in 1975 to its current location, a Grade II-listed former tea warehouse dating from the 1830s.

1900s

2000s

2000s

Bristol Harbourside Regeneration

Bristol was ranked as the tenth-busiest port in the UK in 2006.<sup>7</sup> The annual volume of its international container traffic rose from 4.8 million tons in 1990 to about 12 million tons in 2008 and it serves as an important gateway for the transport of freight between the Atlantic seaboard, Ireland and continental Europe.<sup>8</sup>

However, over 800 years of maritime tradition ended when Bristol's city-centre docks finally closed in 1975.<sup>9</sup> The old Portishead dock had also reached the end of its commercial life by this time after a steady decline. Restoration and new-build housing schemes around the Bristol Harbourside site have included Rownham Mead, Bathurst Basin/

Merchant's Landing and Baltic Wharf.

The Urban Development Corporation, created in 1987, initiated the development of the area between the A4 and Temple Quay as a mixed-used site, though the organisation had been dissolved before the work was completed. This is now one of Bristol's core office areas with occupiers that include Osborne Clarke, HSBC, DEFRA, the Royal Bank of Scotland and BT.<sup>10</sup> Other recent waterside developments have been The Point, Capricorn Quay and Canon's Marsh.

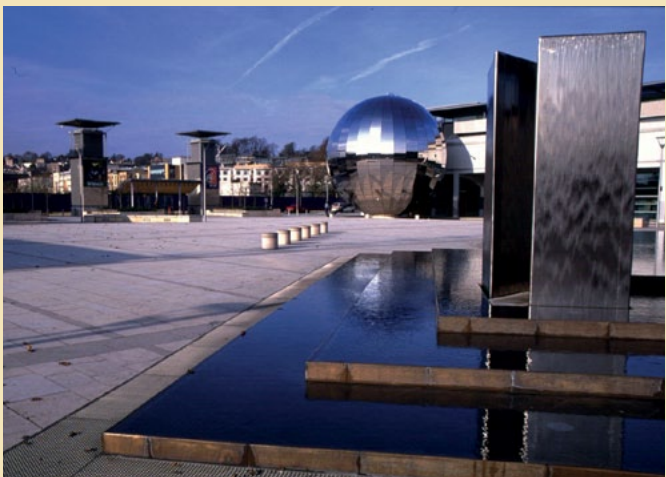
The main new cultural addition to Harbourside has been the at-Bristol complex on Millennium Square

(opened in 2000). The axing of the planned Harbourside Centre for the Performing Arts in 1998 following the controversial withdrawal of Arts Council support was a considerable disappointment. The current proliferation of large, chain bars in this area is equally disappointing for some.

The regenerated waterfront is now promoted as a visitor and leisure destination, as well as for residential and business use. Its attractions include the Harbourside Festival, ferry-boat trips, sailing schools, ss *Great Britain* (returned to the city in 1970), Arnolfini, Watershed (opened in 1982) and the Architecture Centre (opened in 1996).



Bristol Cathedral seen from the harbourside, 2010 (© Anthony O'Neil under the Creative Commons Licence <http://is.gd/JgNsZz>).



Water feature in Millennium Square (Destination Bristol). To the left are the air vents for the underground car park; to the right are the Planetarium and Explore at-Bristol.



**2003** The first Bristol Great Reading Adventure.

**2005** The West of England is designated as one of the UK's six science cities. A direct Bristol-Newark service is introduced by Continental Airlines (terminated in 2010). Work begins on the Bath Business Park at Peasedown St John. Bath Spa University College is given university status. The first Bristol Festival of Ideas.

**2006** Brunel 200: a year-long, region-wide celebration of the bicentenary of Brunel's birth. Thermae Bath Spa, an ambitious Millennium project, finally opens after several delays.

**2008** Cabot Circus opens. It is the largest regeneration scheme in Bristol city centre since the post-World War Two reconstruction programme. Bristol/South Gloucestershire is named as the first UK Cycling City, with the aim of doubling the number of cyclists in the West of England by 2011.

**2009** The first phase of SouthGate retail space opens in Bath, built in conjunction with a new transport interchange.

**2010** An extensive development proposal for Bristol airport receives planning permission. Weston-super-Mare's new Grand Pier opens, the original pier having been devastated by fire in 2008. BAC 100: a year-long celebration of the centenary of the founding of the Bristol Aeroplane Company and of aviation in the city-region. Regional Spatial Strategies are abolished by the new national government.



Broadmead and Cabot Circus shopping centres in Bristol (Destination Bristol/Cabot Circus) and SouthGate in Bath (© Freia Turland Photography). Bristol is the 13th-largest retail centre nationally and the largest in the South West. In the same ranking, Cribbs Causeway shopping mall at Patchway was placed 38th nationally and Bath 42nd.<sup>11</sup>



2000s

2000s

2000s

## Bristol Cultural Development Partnership

Founded in 1993 under the directorship of Andrew Kelly, Bristol Cultural Development Partnership (Arts Council England, Bristol City Council, Business West) started as a strategic planning agency for cultural activity, leading the cultural renewal of Harbourside including the early stages of the creation of at-Bristol. It also led the bid for the 1998 Year of Photography and the Electronic Image.

BCDP moved on to instigate and lead such initiatives as the Encounters festivals, Digital Arts Agency and South West Arts Marketing and spent much time ensuring the survival and renewal of key city-centre organisations, particularly

Arnolfini and Watershed, as well as providing support to various groups to strengthen their management and activity.

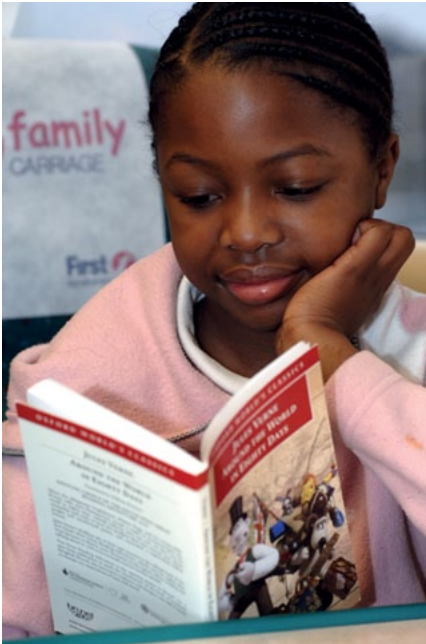
It spent four years planning Bristol's shortlisted bid to be 2008 European Capital of Culture. Even though Bristol failed to secure the final nomination, it was designated a centre of culture by the government as a result of this work and many of the plans within the bid document were delivered, including the 2006 Brunel 200 celebrations, which encompassed the whole of the South West region, eight annual Great Reading Adventures, the annual Festival of Ideas and BAC 100 (2010), marking the centenary of the local

aviation industry. BCDP was also instrumental in the development of Bristol Legible City.

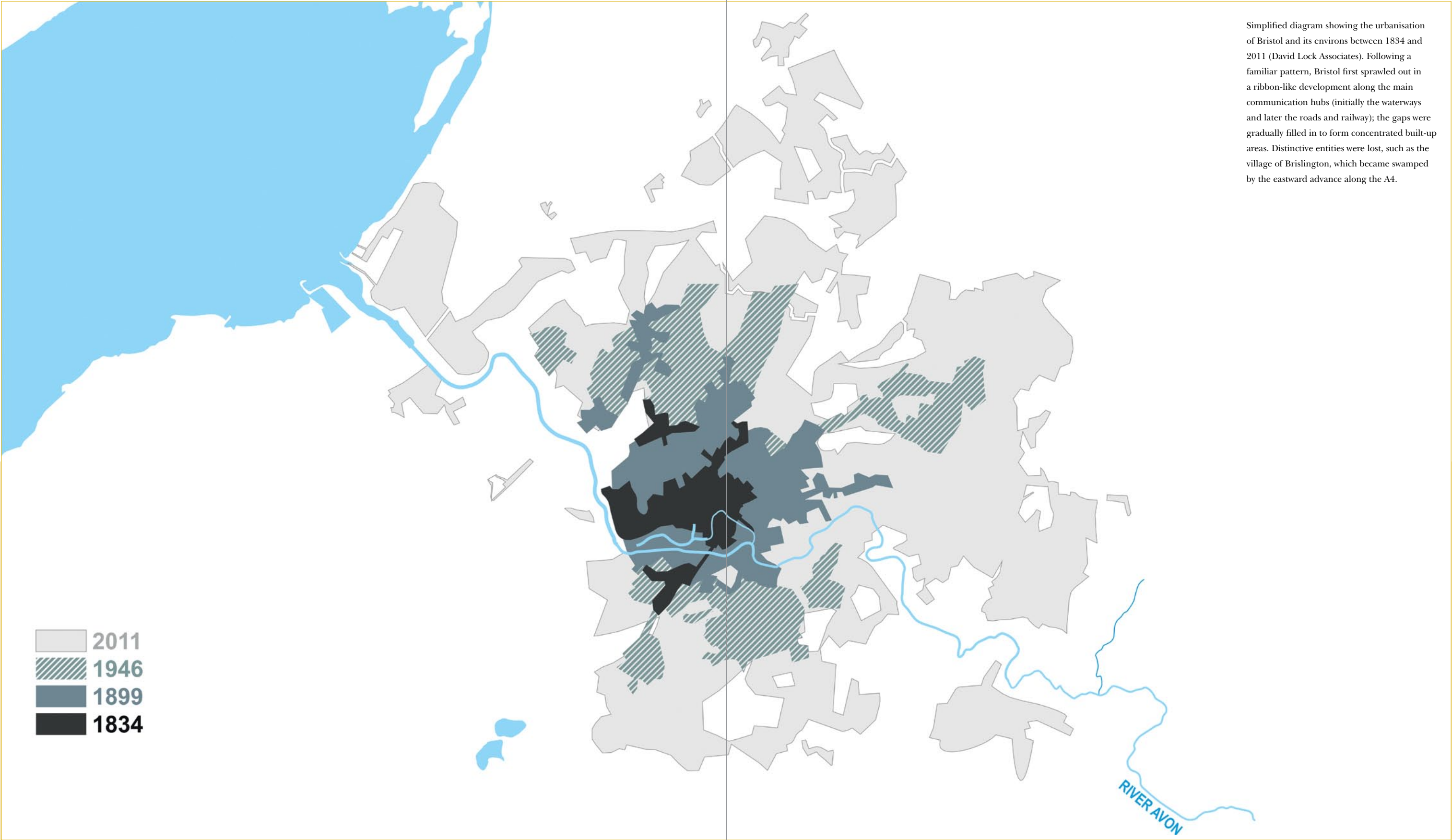
BCDP sees thriving cultural activity and the celebration of innovation and ideas in the city-region as vital for the development of the West of England.<sup>12</sup>

Participant in the 2006 Great Reading Adventure, which formed part of Brunel 200, an extensive community-based heritage, science and arts programme which covered the whole of South West England (photographer Neil Phillips).

Section of the Flight exhibition at Bristol's City Museum and Art Gallery, which was the main public event of the BAC 100 programme in 2010 and attracted over 65,000 visitors (photographer Martin Chainey).









# The West of England City-Region: Where we are today

The basis of the 2050 vision is that the city-region will inevitably grow from its present state and that this is desirable from a business perspective, but that growth needs to be managed effectively and not in the sometimes haphazard way experienced in the past. The population will increase as a result of longer lifespans and more inward migration by those attracted to the city-region by the quality of life enjoyed here. This means that new jobs will need to be created to avoid worklessness and its associated social problems, and new homes built in addition to new and larger facilities for work, education, health and social activities. All this must be planned strategically now, based on our understanding of our current strengths and weaknesses, to avoid growth having a detrimental impact upon what we value in the city-region and to address factors which are limiting our potential.

Aerial view across Bristol to the Severn Estuary showing Ashton Gate football ground, current home of Bristol City FC (Destination Bristol).



Bristol has been identified as a buoyant city – one that tends to experience above-average population growth and to have a dynamic private sector economy. Such cities are likely to be most in need of major expansion to fulfil their promise.<sup>1</sup> Economic growth in the city-region over the next ten years is already predicted to be higher than the national and regional average and to compare favourably with that of other Core Cities. With the threat of global warming and the depletion of oil reserves, the growth we hope to achieve needs to be low-carbon and environmentally sustainable and also well-balanced and resilient, with its benefits widely shared. It must be a source of strength, well-being, diversity, opportunity and economic vitality, not of further traffic congestion, pollution and inequality.

It is neither possible nor desirable for the city-region to remain as it is now. The drivers for change that are acting upon it can be seen as either threats or opportunities: threats to what is currently prized; opportunities for rectifying problems. Some of the drivers are within the city-region’s power to deal with directly, but even those which are not – for example, drivers which affect the world as a whole – may still need to be addressed within the vision for the future. Some might be considered as part of an action plan for the entire city-region; others might have purely local significance. Some are already mature; some have not yet reached maturity; some have yet to emerge.

The drivers that have been identified through the consultation process as being of particular relevance to the 2050 vision for the West of England are:

- The changing demographic: an increasing, aging and, in some areas, more affluent population will have a major impact upon the employment, housing, social services and character of the city-region.
- Poverty and social tensions: the probability of increasing divisions in the population in terms of educational aspirations and attainment, employment, pay, health, housing and opportunities for advancement.

- Investment in education: an expectation of high-quality learning services being effectively delivered to all sectors of society and at all levels of education.
- Health: with particular pressures on the sector from increasing life expectancy and also increases in obesity, diabetes and other chronic illnesses.
- Environmental issues: the impact of air and water quality, climate change, waste treatment, energy conservation and energy production.
- Mobility: particularly the need to reduce car dependency and improve public transport travel times and costs.
- The rising stars: locations that are expected to grow as attractors of various activities and patterns of movement.
- Technology: including its impact upon transport, the environment, health and the workplace.
- Crime: reducing crime rates where this continues to be a problem, as well as addressing persistent poor perceptions of the relative safety of sections of the city-region.
- Politics: changing national, regional and sub-regional priorities, policies and structures.

Further analysis is required of the nature of these drivers and our response to them, but the following provides some snapshots of where we are now in terms of growth potential, infrastructure, connectivity, our green and blue spaces and other key elements of the 2050 vision, all of which will be affected by one or more of the drivers outlined above. Other elements will need to be incorporated into the final master plan to ensure consistency and coherence.



## Room for Growth

The current imbalance in housing demand and supply in the West of England has contributed to delays in household formation; overcrowding; higher numbers of homeless people; increased pressure on the social-rented/affordable housing stock; an increase in unsustainable travel-to-work distances; and labour shortages due to outward migration. These are all barriers to growth.

The market demand for large-scale business premises in the city-region is thought to have been successfully addressed for now, but capacity for future business growth will remain limited without further building developments.

According to the Homes and Communities Agency there is a total of 1,052 hectares of brownfield land available in the West of England, of which 554 are considered suitable for housing. At, say, an average *gross* density of approximately 35 dwellings per hectare (in reality this number could be higher), this could provide space for around 20,000 new homes.<sup>2</sup> This is far short of the

200,000 we estimate are required. In addition, we not only need space for building new homes and new or larger places of employment, but also new or larger places for education, shopping, recreation and cultural life. Although urban intensification is preferable to urban expansion in most instances, some green spaces will have to be built on to accommodate this need.

Artist’s impression of development at Bath Western Riverside built on one of the few brownfield sites available in the city (courtesy of Crest Nicolson). Concerns about the threat to the city’s World Heritage status led to some modifications to the original scheme for the site, but the first phase of development has now begun.<sup>3</sup> Riverside is part of a larger council vision to develop a creative and knowledge-based City of Ideas, providing new business space, new jobs, new homes and more economic vibrancy while still protecting the city’s heritage.



		2010	2050	Change 2010-50	Change %	Annual change	Annual change %
Population		1,093,000	1,594,000	505,000	46%	12,500	1.2%
Housing	High	459,500	672,500	213,000	46%	5,318	1.2%
	Medium	459,500	647,500	188,000	41%	4,700	1.0%
	Low	459,500	616,500	157,000	34%	3,914	0.9%
Employment	High	561,000	761,000	200,000	36%	5,000	0.9%
	Medium	561,000	725,000	164,000	29%	4,100	0.7%
	Low	561,000	691,000	130,000	23%	3,240	0.6%



Top: Table showing projected growth in key variables across the West of England to 2050 (data compiled from various sources by UWE).

Above: Map of flood plains in the West of England based on material from the Environment Agency (David Lock Associates). The Severn Estuary Partnership is making plans for an expected rise in sea level of approximately one metre over the next 100 years and for river flows to increase by up to 20 per cent – factors that need to be taken into consideration when planning new development in the at-risk areas.<sup>4</sup>



Above: Map showing (in hatched green) the Avon Green Belt and (in solid green) the environmentally sensitive areas in and around the West of England which are protected by UK and/or international law from further development and change (Robert Freshwater based on maps created by David Lock Associates). The protected areas include National Nature Reserves, Areas of Outstanding Natural Beauty, Special Areas of Conservation, Special Protection Areas, Sites of Special Scientific Interest and Ramsar Wetland. These sites are not only of ecological importance and make a significant contribution to conservation programmes, they also provide the types of attractive spaces for recreation and well-being that inspire people to relocate or remain in the West of England, contributing to the city-region’s competitive advantage over other parts of the country.

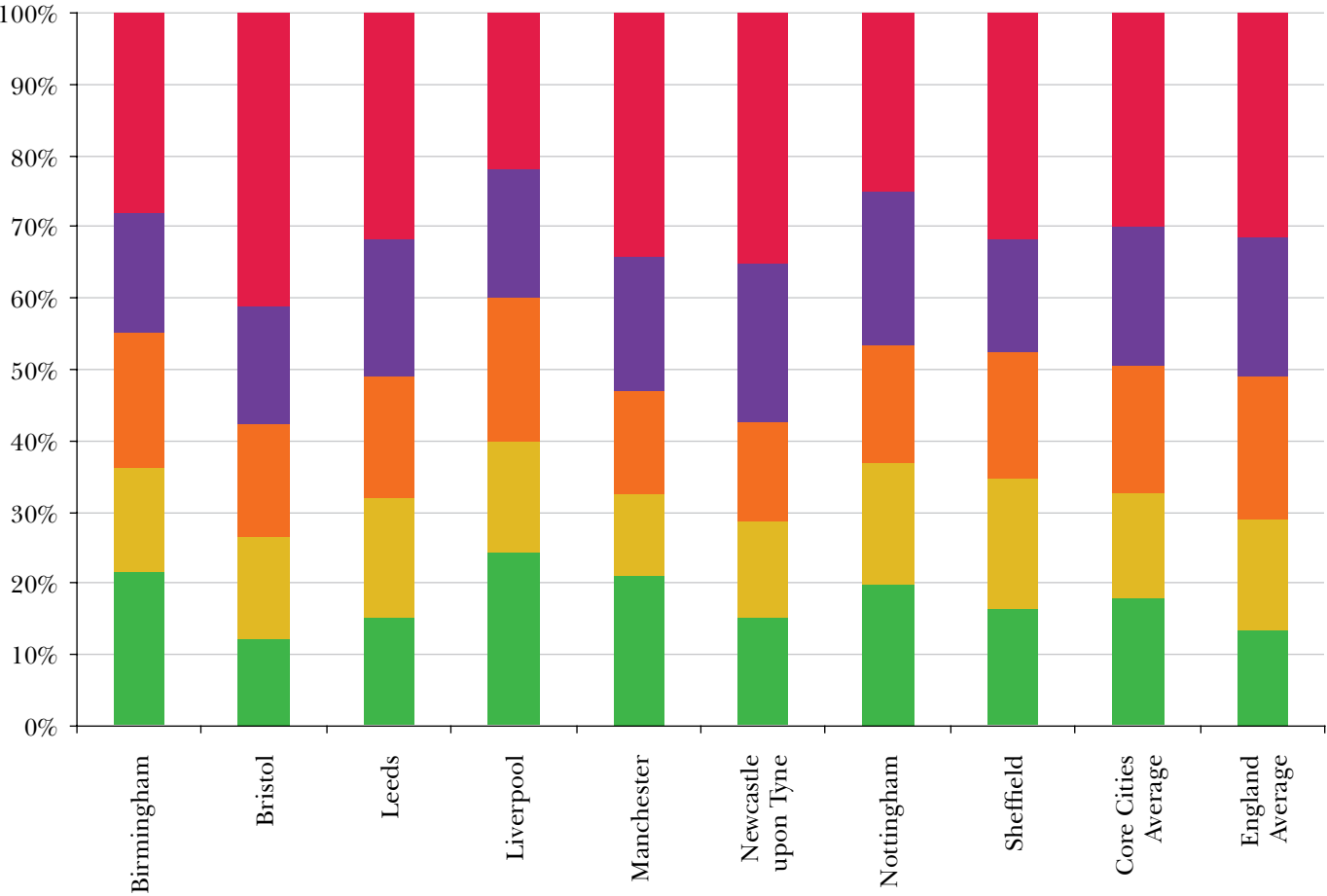
## Education and Skills

Having people able to develop the capabilities to find work and build the successful businesses and industries of the future in the city-region is another key growth factor. Access to employment for some sectors of the community is hampered by a basic lack of educational qualifications and skills and there are particular concerns about the number of pupils moving from primary to secondary school who are functionally illiterate and innumerate. The average examination results across the city-region are generally comparable to those in other parts of the country, but there are wide discrepancies between individual schools and the state provision for secondary education in Bristol continues to be of concern. The ability of young people to make a successful transition from school to further/higher education, employment or training helps them avoid social exclusion in later life.<sup>5</sup>

Skill shortages in the West of England are currently most numerous in skilled trades and among process, plant and machine operatives.<sup>6</sup> However, it is the gap in managerial skills that could potentially have the greatest impact on business performance and growth.

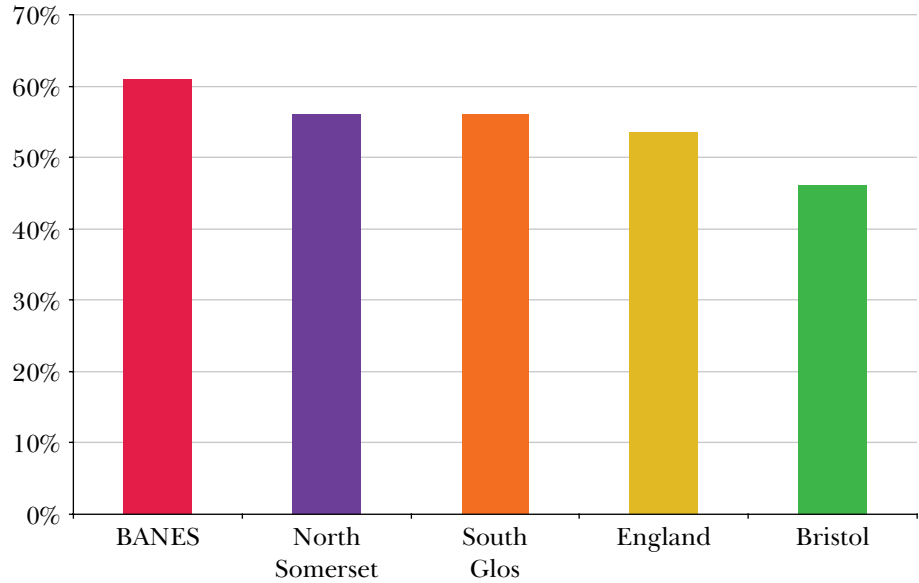
Graph comparing qualification levels in the Core Cities (based on Office of National Statistics Annual Population Survey 2008). Nearly 32 per cent of the West of England’s working-age population is qualified to at least NVQ Level 4, though this figure is somewhat skewed by the fact there are four universities in the city-region.<sup>7</sup> The West of England has the highest proportion of highly qualified workers outside of London.<sup>8</sup>

- Level 4+
- Level 3
- Level 2
- Below Level 2
- No Qualifications

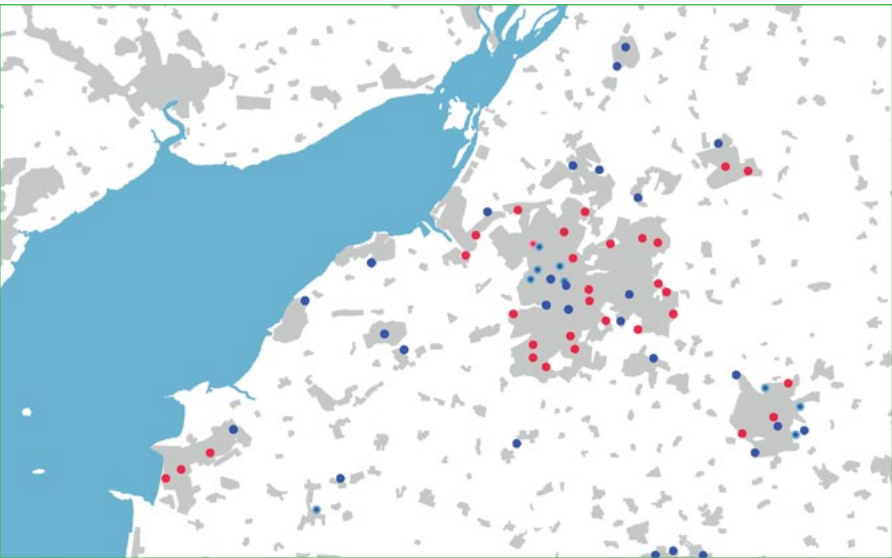
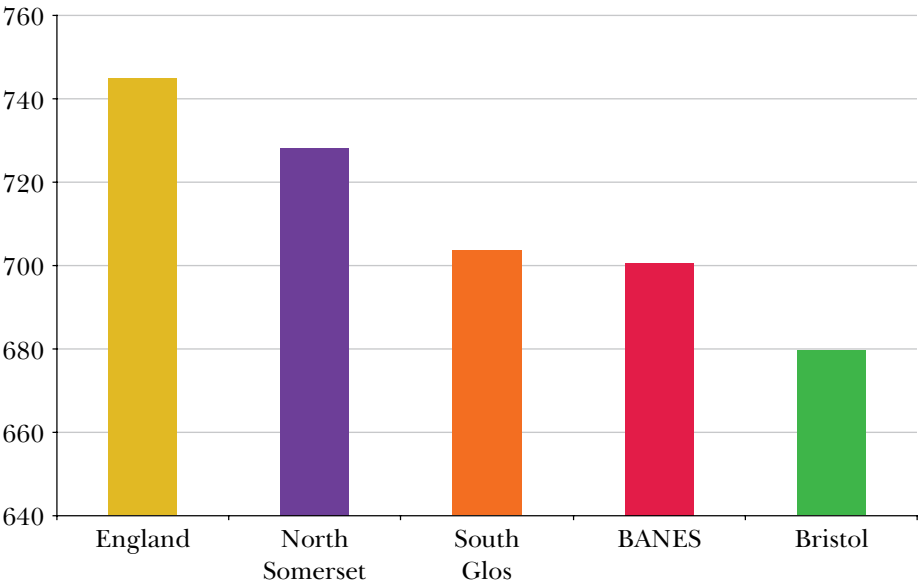




Graph showing the percentage of pupils in the West of England achieving five or more grade A\*-C at GCSE (including English and Maths) or equivalent, 2010 (based on information from the Department for Education). Only Bristol is below the national average.



Graph showing the average point score per pupil in the West of England at A/AS-level or equivalent, 2010 (based on information from the Department for Education). All of the local authorities are below the national average.



- Independent institution above the national average
- State institution above the national average
- Independent institution below the national average
- State institution below the national average

Map showing the distribution of individual schools (where results known) above or below the national average for achieving five or more grade A\*-C at GCSE (including English and Maths) or equivalent, 2010 (Robert Freshwater based on information from the Department for Education).



Map showing the distribution of individual schools (where results known) above or below the national average for point score per pupil at A/AS or equivalent, 2010 (Robert Freshwater based on information from the Department for Education).



Map showing the main sites and relative sizes of the four West of England universities (Robert Freshwater). Student numbers: University of the West of England 31,645, University of Bristol 21,000, University of Bath 13,380 and Bath Spa University 8,160. Although the universities are a significant asset for the city-region, the West of England is an effective exporter of graduates to other regional economies, most notably to the rest of the South West.<sup>9</sup> Consequently, people outside the city-region need to be recruited to fill appointments in some of the most highly paid employment sectors.<sup>10</sup>

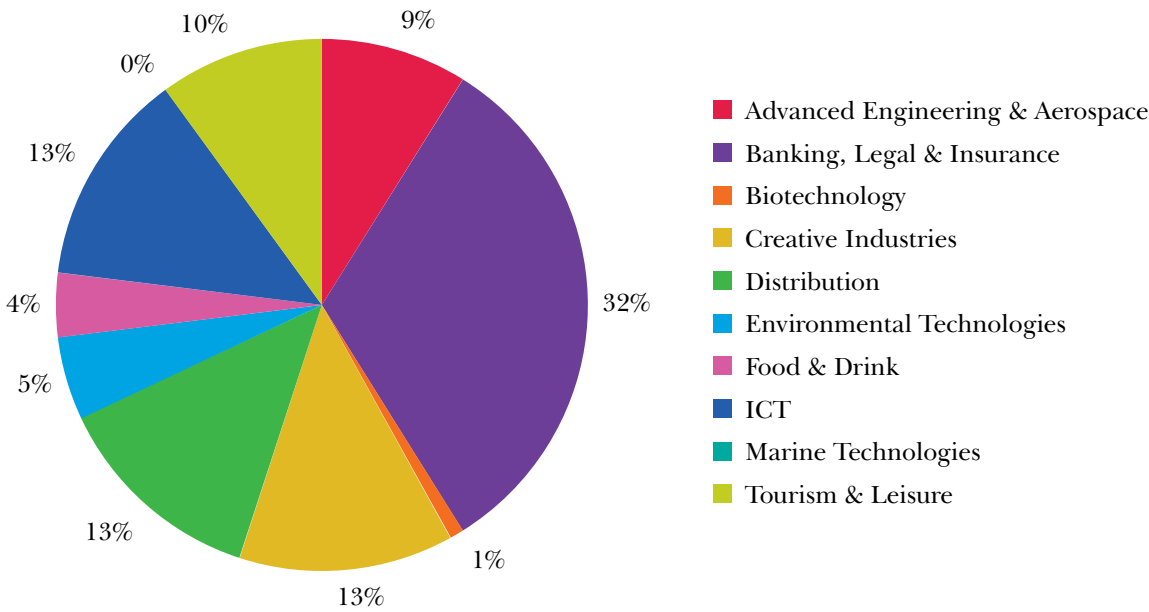


Employment, Worklessness and Income

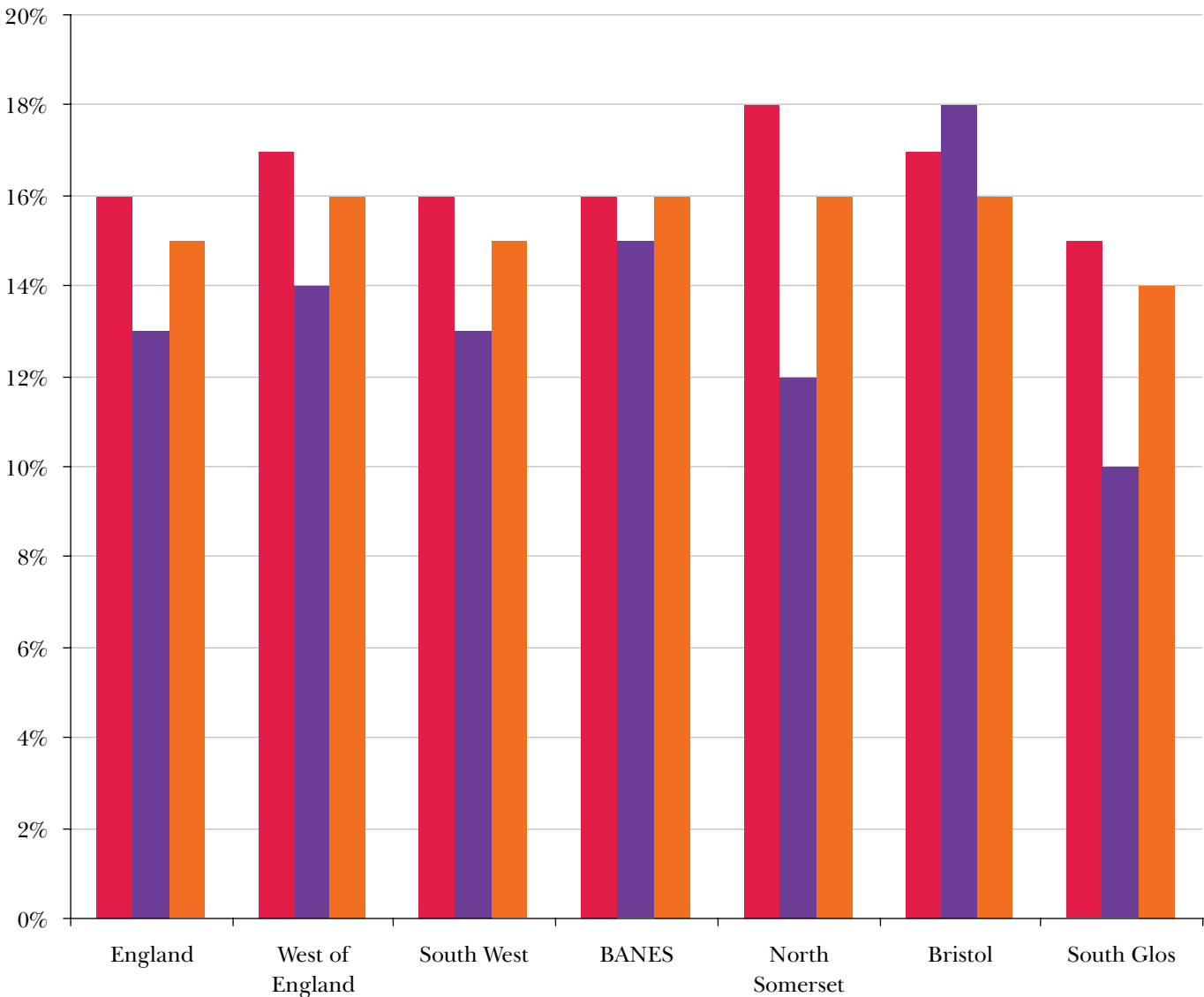
The economy of the West of England displays considerable diversity, with 59 of the 88 employment sectors (as defined by the Standard Industrial Classification) employing more than 1,000 people.<sup>11</sup>

Over the last 25 years, media, financial and service industries and high-end technology have replaced the traditional industries of manufacturing, printing, packaging, tobacco, wine importation and chocolate manufacture, among others, as significant employment sectors. Specialist areas which might be termed Centres of Excellence for the city-region include aerospace/defence, insurance, parts of the creative industries sector, Bath tourism and higher education.<sup>12</sup>

Chart showing the city-region’s key employment sectors (based on information from Intelligence West’s West of England Key Statistics Autumn 2009). It is considered a strength that the city-region is not dependent on a single employment sector, although there are still concerns that areas with a high level of public-sector employees may face difficulties in the light of the current government spending cuts.



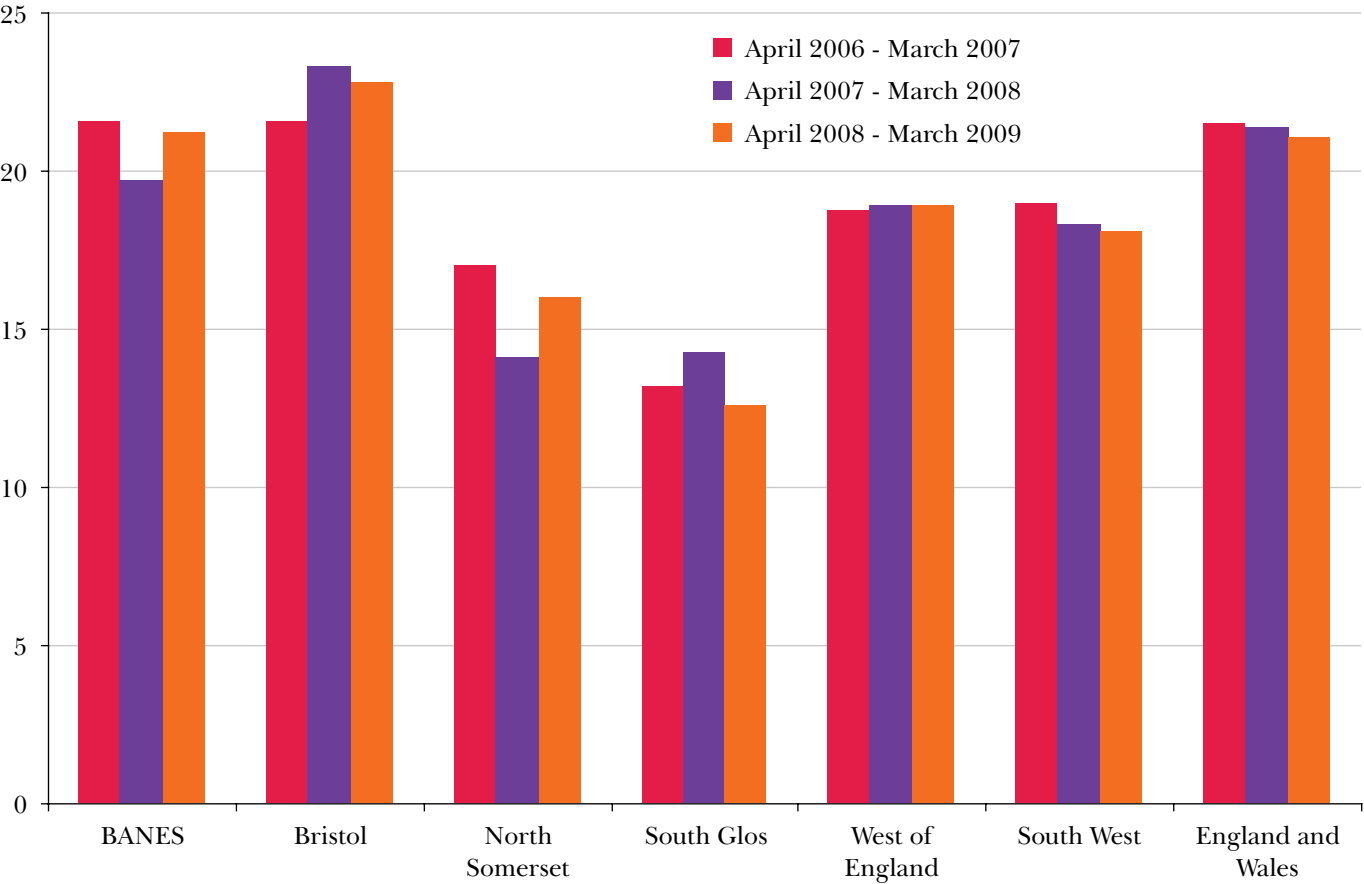
Organisations employing more than 5,000 staff in the city-region include Bristol City Council, South Gloucestershire Council, Bath & North East Somerset Council, the Ministry of Defence: Defence Equipment and Support (Filton), North Bristol NHS Trust, University Hospitals Bristol NHS Foundation Trust and the University of Bristol.<sup>13</sup>



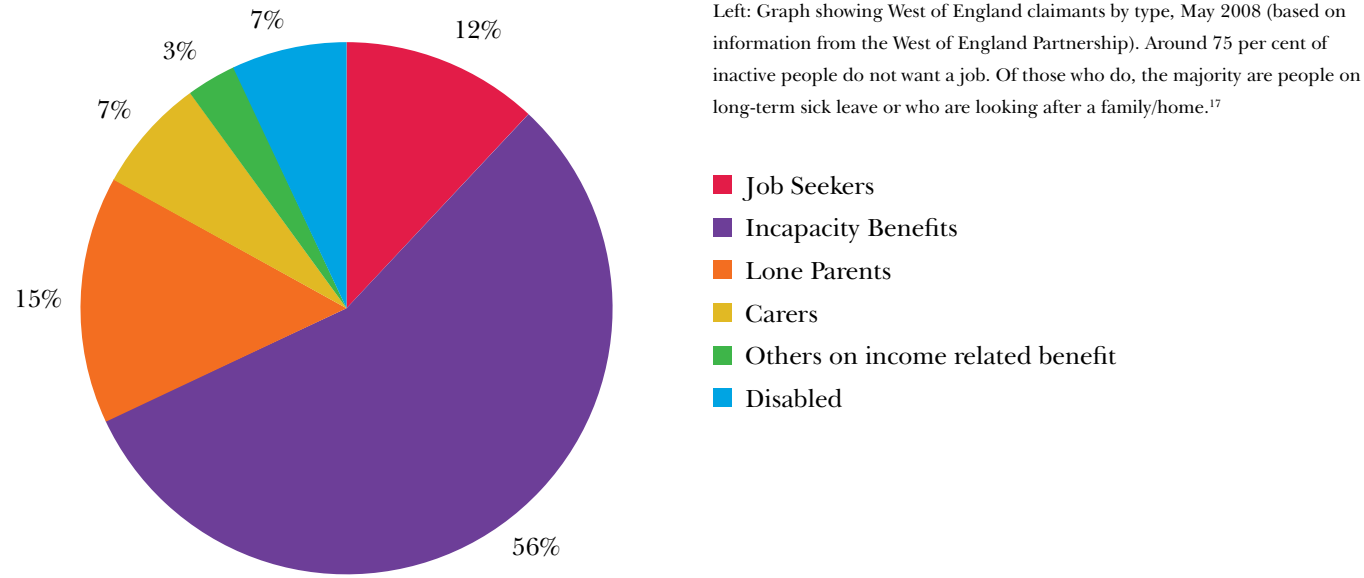
Managers and Senior Officials  
Professional Occupations  
Associate Prof and Tech Occupations

Graph showing employment in higher-level occupations in the West of England, July 2008-June 2009 (based on Annual Population Survey). Over the period 2007 to 2017, the largest projected increases in employment for the city-region are expected to be among these types of occupation.<sup>14</sup>

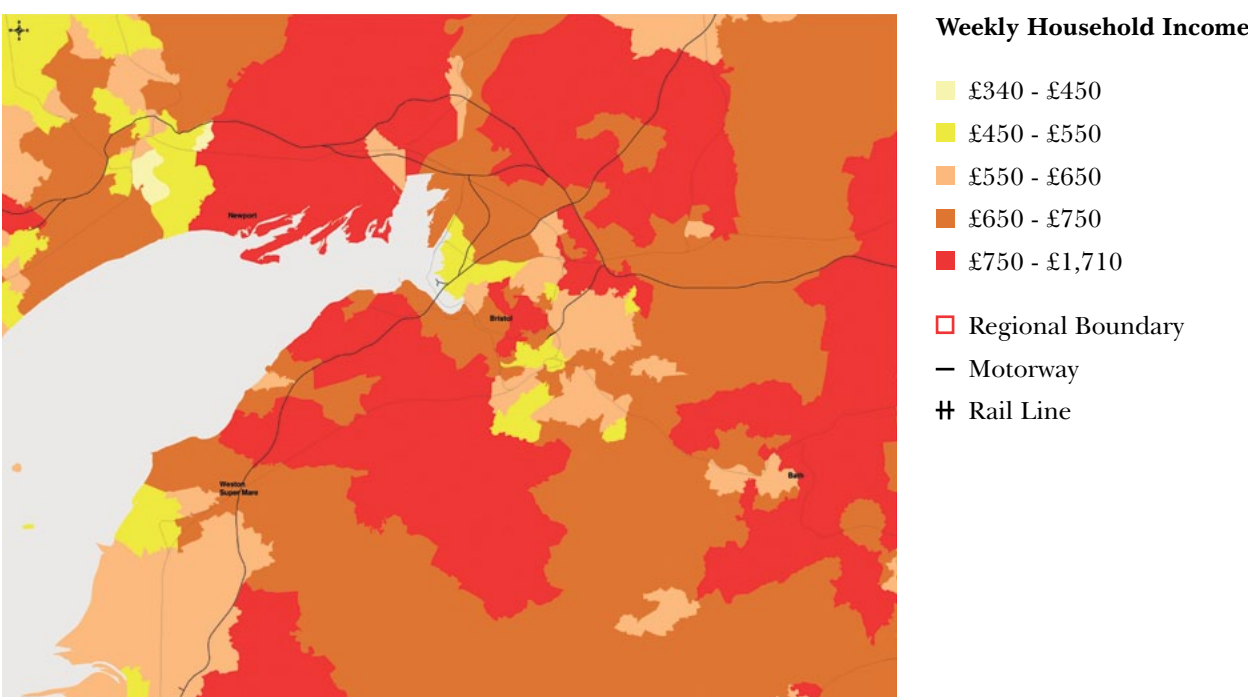




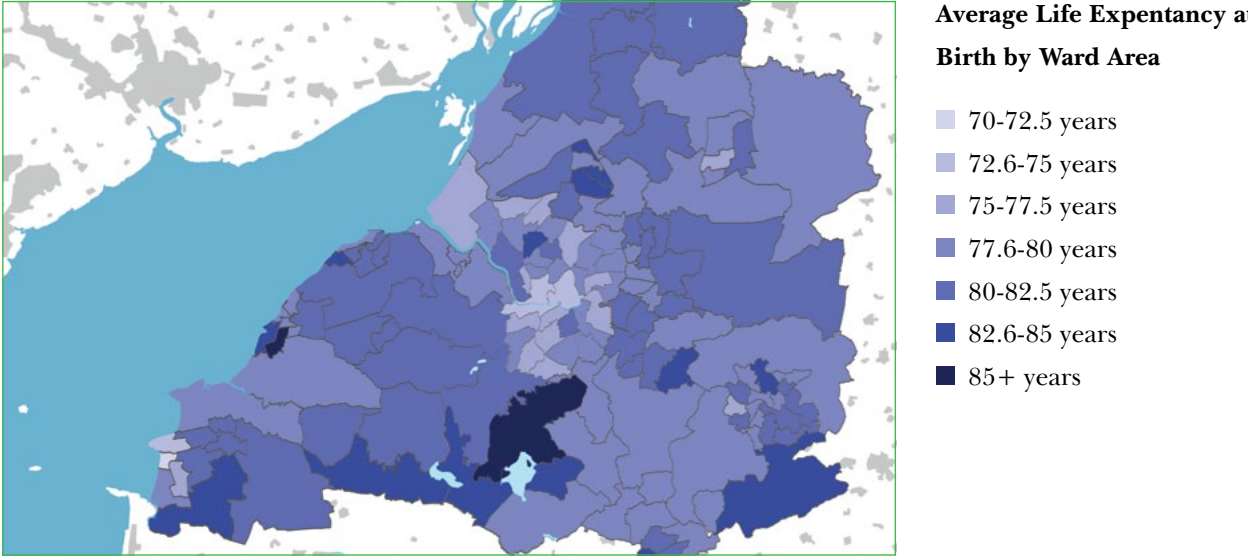
Above: Graph showing the percentage of the working-age population economically inactive in the West of England, April 2006-March 2009 (based on information from the West of England Partnership). Worklessness is often associated with various forms of disadvantage, including low educational attainment, poor health, poverty, sub-standard housing, high levels of mental and family stress and shorter life expectations. Many people in the West of England are excluded from work opportunities at present and current levels of worklessness act as a significant brake on the city-region's ability to fulfil its economic potential.<sup>15</sup> The young account for almost a third of all workless claimants in the city-region and are twice as likely to be out of work as older people. Tackling this cohort effectively will have a significant impact upon the West of England's long-term labour demand; left unchecked, it could prolong the problem of generational unemployment.<sup>16</sup>



Left: Graph showing West of England claimants by type, May 2008 (based on information from the West of England Partnership). Around 75 per cent of inactive people do not want a job. Of those who do, the majority are people on long-term sick leave or who are looking after a family/home.<sup>17</sup>



Map showing weekly household income, 2008 (David Lock Associates). The polarisation of city-regions into markedly different zones of income can lead to social problems and a lack of community cohesion. There are 11 wards in the West of England that account for over a quarter of workless claimants in the city-region: Kingsweston, Southmead and Lockleaze in North Bristol; Ashley, Lawrence Hill and Easton in East Central Bristol; Filwood, Hartcliffe and Whitchurch Park in South Bristol; Weston-super-Mare South and Weston-super-Mare Central. They contain areas with multiple disadvantages and residents cut adrift from the relative prosperity of the rest of the city-region.<sup>18</sup>



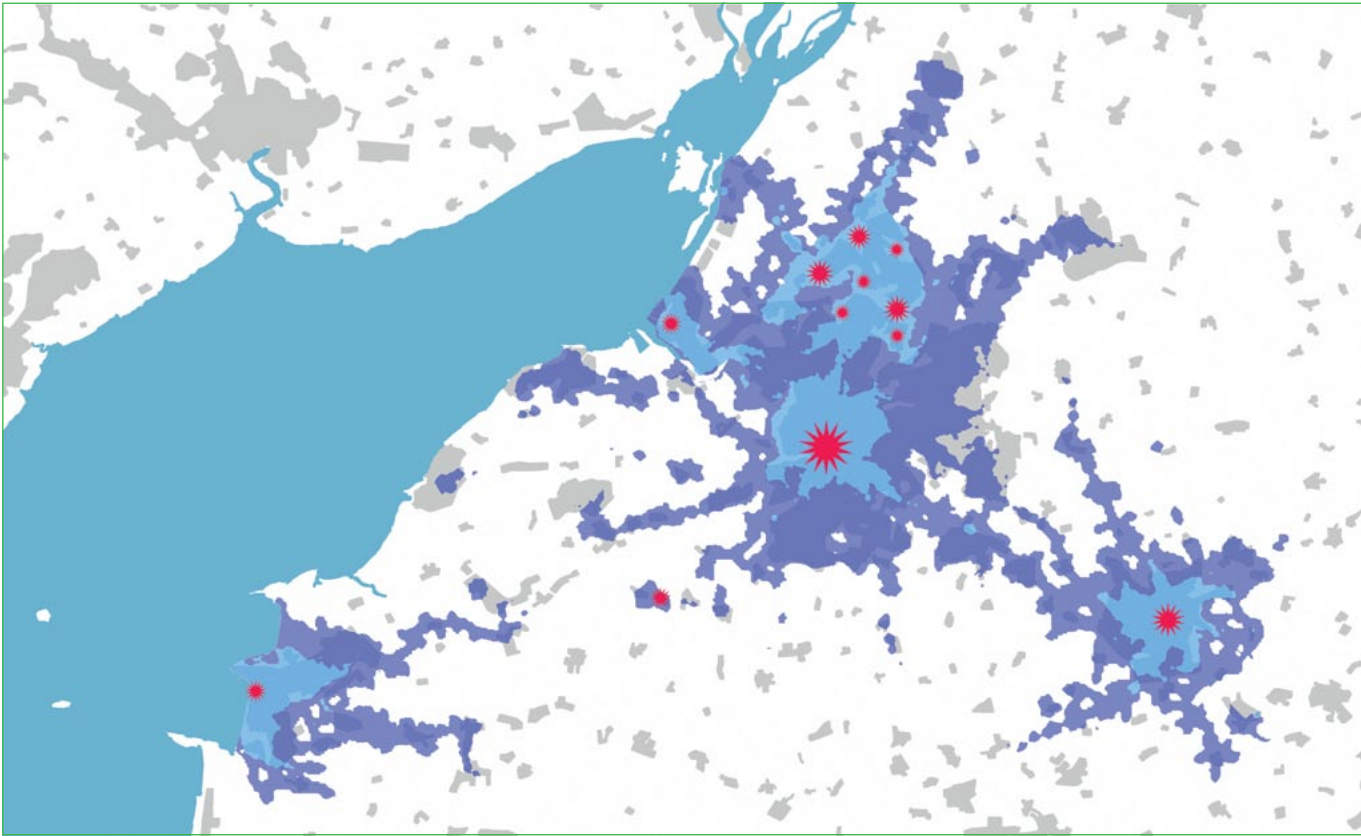
Map showing average life expectancies across the city-region (Robert Freshwater using information from Office of National Statistics Mortality Data Set 2001). The palest blue represents 70-72.5 years; the darkest 85 and more years. Some correlation can be seen between income levels and life expectancy.



## Transport within the City-Region

The absence of an effective transport infrastructure in the West of England is a major constraint on growth in the city-region.<sup>19</sup> A study in 2009 concluded that Bristol had by far the worst transport provision of the UK's 12 leading cities.<sup>20</sup> Although there were signs of improvement since a similar study conducted in 2003, levels of transport spending and rail service frequency per head in Bristol were too low for a city of its density of population, GDP, quantity of office stock and ambition. Present modes of transport in the city-region are unsustainable in the longer term.

The Campaign for Better Transport has ranked Bristol fourth out of 19 cities in terms of the accessibility and planning of its transport system.<sup>21</sup> However, Bristol was only ranked 18<sup>th</sup> for the quality and uptake of its public transport. Where public transport is expensive, inaccessible and unreliable, and the population is consequently heavily dependent on the use of the private car, there are often higher levels of poor health, noise and air pollution and travel delays. Those who are on lower incomes and unable to buy their own cars are further disadvantaged as they have no alternative to the high-priced and inadequate public transport on offer.



Map showing the accessibility of the main employment centres in the West of England (Robert Freshwater using information from the West of England Partnership). The light blue indicates access time under 20 minutes; the dark blue access under 40 minutes. Around 93 per cent of those working in the West of England also live there, making it virtually self-contained.<sup>22</sup> While 40 per cent of the 70,000 people currently employed in the North Fringe travel more than six miles to their workplace, 50 per cent of the daily car journeys to work in the city-region are of less than three miles.<sup>23</sup> Much of the city-region's strategic road network is congested at peak travel times because of the high volume of commuters in private cars. Rising congestion in the West of England threatens the well-being of the local economy and the regeneration of disadvantaged communities.

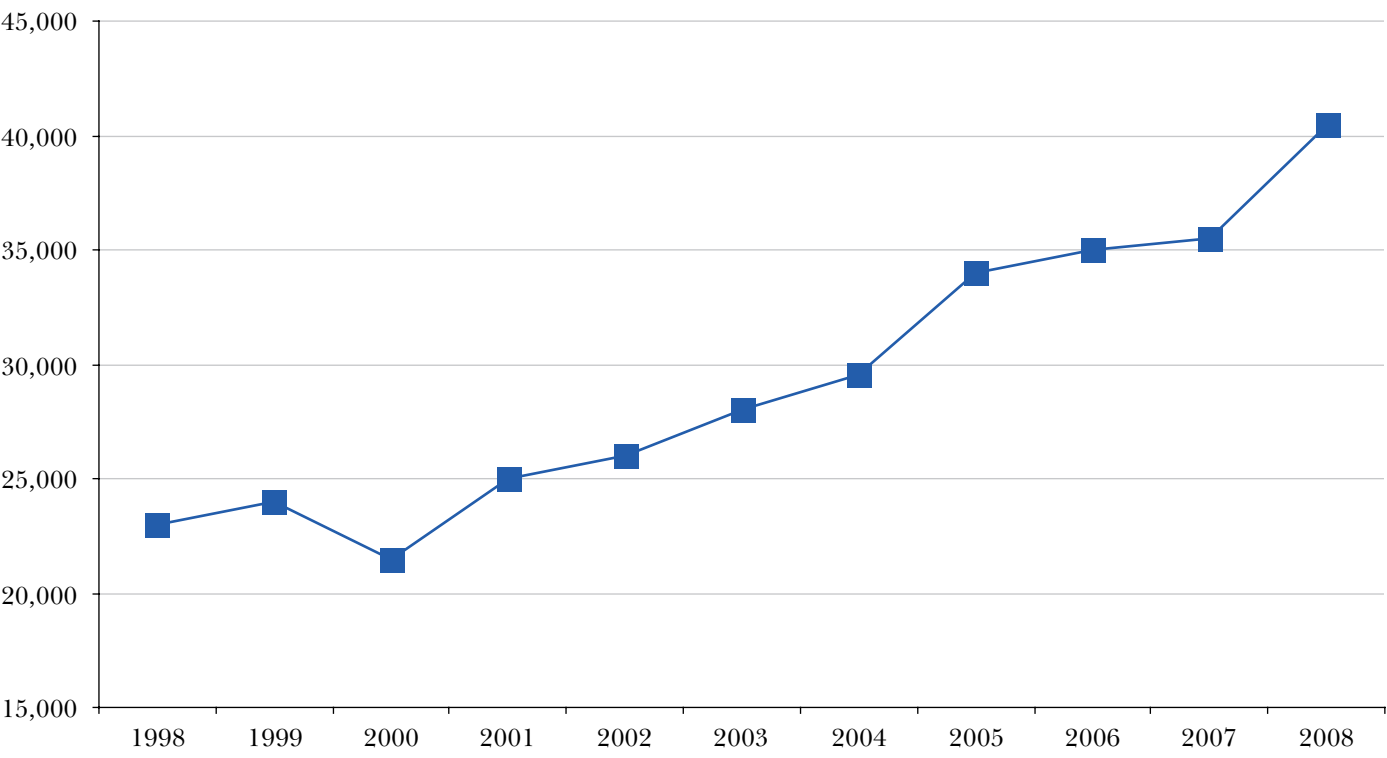


Map showing average age, 2001 (David Lock Associates). Both the elderly and the young are particularly dependent on public transport.



Map showing health care accessibility across the city-region (Robert Freshwater using information from the West of England Partnership). The green area indicates access time under 30 minutes. Research in 2009 showed that 57.3 per cent of households in the city-region had access to health facilities by public transport within 30 minutes, ranging from 74.5 per cent in Bristol to 41.6 per cent in North Somerset.<sup>24</sup>





Above: Graph showing annual rail journeys in the West of England, 1998-2008 (based on information from the West of England Partnership). In recent years there *has* been an increase in public transport use in the city-region, particularly trains, but investment is not yet adequate to meet current demand and provide for future growth. Although rail services (long distance and local) in Bristol in 2008/2009 carried almost 41 million passengers, an increase of 44 per cent over the previous five years, only 1.5 per cent of all journeys to work in the West of England are currently made by rail.<sup>25</sup>



Above: One of the new showcase buses operating in the city-region (Bristol City Council). Ten per cent of all journeys to work in the West of England are made by bus, with over 29 per cent of those working in Bristol city centre using the local bus to commute and 20 per cent doing so in Bath.<sup>26</sup> Current initiatives to increase the use of buses in the city-region include the Greater Bristol Bus Network – ten new showcase bus corridors of which the first, Weston-super-Mare to Bristol, has recently been completed. The network forms part of the West of England Partnership’s Travel Plus programme.

## National and International Connections

Across the city-region, all areas are within a 30-minute journey of the national rail network. Particularly significant in terms of connectivity are the Great Western Railway Mainline between London and South Wales and the West Coast Mainline, which runs northwards towards Birmingham. However, currently the city-region suffers from the lack of a high-speed rail service towards London and of a direct rail service into central Europe via the Channel Tunnel. It is also at a disadvantage in that it can only offer connections to one major European city within one hour’s flight time: flying to Dublin from Bristol Airport. In addition, the proportion of international business road trips generated from the West of England is small in comparison to the number of trips generated from the Midlands and the South East.<sup>27</sup>



Above: Computer-generated image of proposed development at Bristol Airport, 2010, part of a successful planning application to increase the facilities at the site (Bristol Airport). Bristol was the fastest-growing of the top ten airports in the UK over the period 1999 to 2008, with an annual growth rate of 13.1 per cent.<sup>28</sup> Although it is convenient having an airport within an hour’s travel time of most parts of the city-region, a significant proportion of flights from Bristol are for tourists rather than business travellers. This contrasts with somewhere like Frankfurt, which has numerous daily return flights to many key European cities. Improving air connectivity needs to be in accordance with the planned reduction in CO<sub>2</sub> emissions.

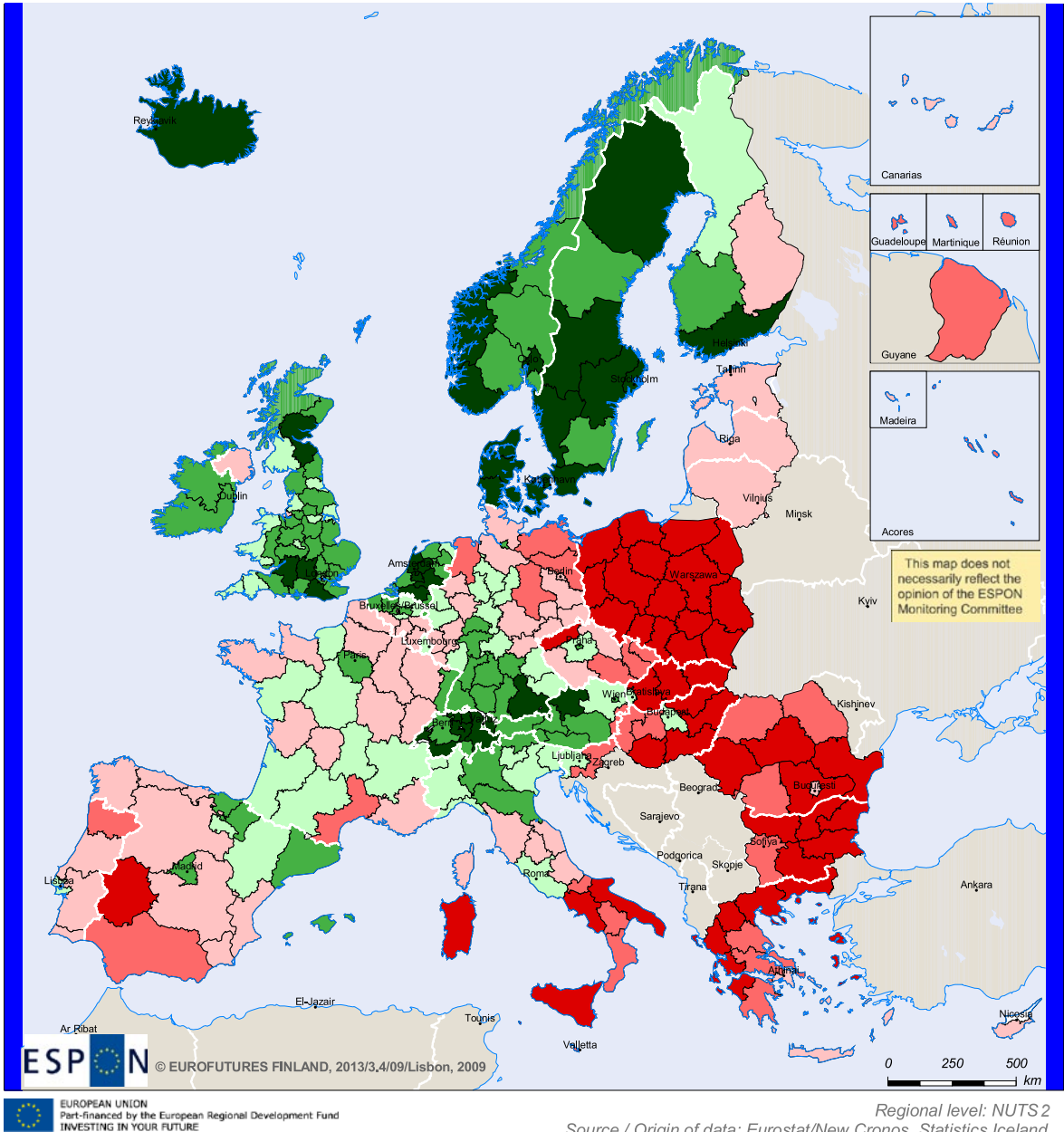


Left: Outline map of Europe showing the area contained within the Blue Banana, a conceptual swathe embracing areas of major GDP generation, and the Atlantic Arc, an area of significant economic trading (Qube Design Associates Ltd). Although the West of England is only on the periphery of the Blue Banana, it seems to be punching a little over its weight economically, considering its relative inaccessibility. This offers significant hope for the future if its connectivity is improved.

Overleaf: Map showing the economic performance of European regions, 2006 (© ESPON, 2013). The West of England is shaded in dark green, indicating it is a high-performance area.

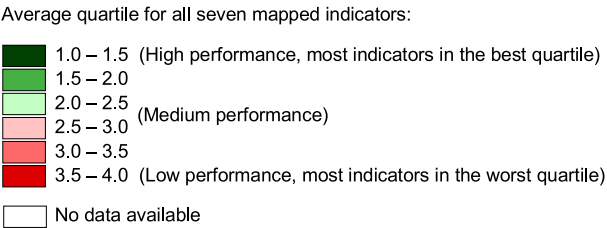


Economic Performance of European Regions, 2006



Regional level: NUTS 2  
Source / Origin of data: Eurostat/New Cronos, Statistics Iceland, Landesverwaltung Fürstentum Liechtenstein, Statistics Norway, Statistik Schweiz  
©EuroGeographics Association for administrative boundaries

Composite Lisbon performance ca. 2006



For each of the seven variables, all regions are ranked from 1 through 287 and then divided into quartiles (1 through 4). Composite performance calculated as the average of these seven quartile rankings.

Composite performance based on following seven regionalised Lisbon short list indicators:

1. Gross Domestic Product in PPS per capita (ca. 2006)
2. Gross Domestic Product in PPS per person employed (ca. 2005)
3. Employment rate, total (ca. 2006)
4. Employment rate, 55-64 years (ca. 2006)
5. Total intramural R&D expenditure (GERD) as a percentage of GDP (ca. 2006)
6. Dispersion of regional unemployment rates (ca. 2006) <sup>1</sup>
7. Long-term unemployment rate (ca. 2006) <sup>2</sup>

Precise data years vary substantially per region. For exact information, see final report of ESPON 2013 project 2013/3.4/09/Lisbon, 2009.

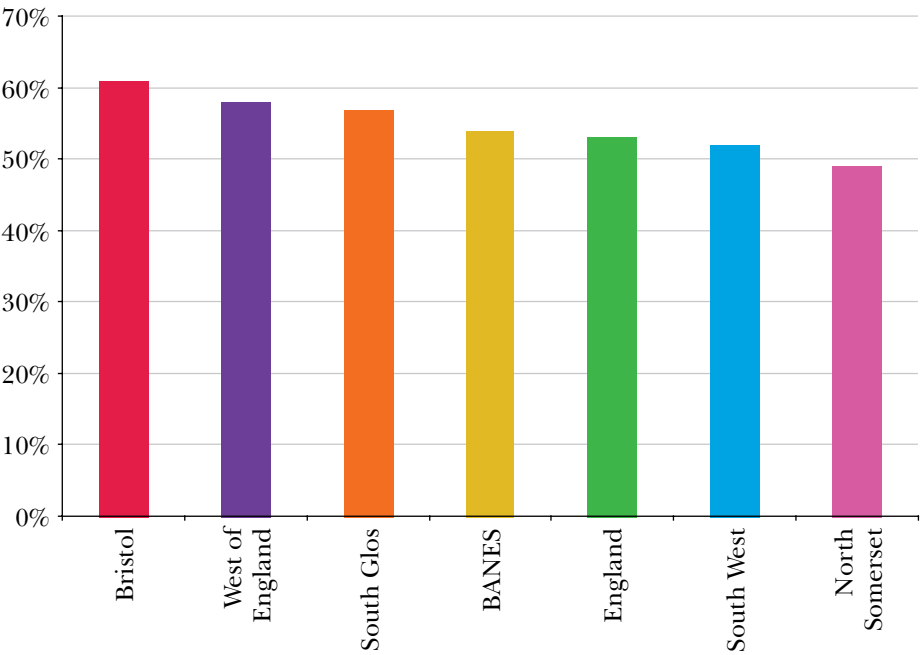
<sup>1</sup> Coefficient of variance [ $s^2 = \frac{\sum (X - M)^2}{N - 1}$ ] of NUTS 3 unemployment rates within each NUTS 2 region.

<sup>2</sup> Persons unemployed for 12 months or over as a share of the economically active population.

West of England: Science City-Region

In 2005 the West of England was named one of the UK's six science cities. The designation was awarded in recognition of the city-region's world-class academic research, business activity and technological innovation and its potential for increasing economic investment through science and advanced engineering. There is a particularly significant cluster of activity around aerospace, information and communication technology and creative technologies.<sup>29</sup> The high productivity, high levels of innovation and highly skilled workforce of many of the technology companies in the West of England, along with the hubs of expertise in the four universities, provide an incentive for like-minded companies to relocate to the city-region. Companies that have opened key sites in the West of England since the early 1980s include HP Labs, STMicroelectronics, Nokia Siemens Networks and Oxford Instruments.<sup>30</sup>

Right: Electrical Engineering student at University of Bath (photographer Nic Delves-Broughton, University of Bath). Bath is a partner in SPark, the new science park at Emerson's Green, along with the University of Bristol and the University of the West of England.<sup>31</sup> SPark aims to act as a hub to connect business to new technologies and to accelerate the commercialisation of academic research. It is considered to have the potential to support over 6,000 knowledge-based jobs in science-related sectors.<sup>32</sup>



Left: Graph showing West of England employment in knowledge-intensive sectors, 2008 (based on Annual Business Inquiry). The city-region's knowledge-intensive sectors (KIS) offer one of the strongest areas for future growth and are likely to continue to drive the West of England economy.<sup>33</sup> These sectors include financial services, education and health services and cultural activities, as well as science and technology. An average of 57.1 per cent of those in employment in the West of England are working in KIS, ranging from 61.3 per cent in Bristol to 49 per cent in North Somerset. The national average is 53 per cent.<sup>34</sup>





## Cultural Activities

The wealth of cultural activity in the West of England is rightly valued for the pleasure it gives to participants and audiences, both residents and visitors, and the added value it brings in terms of community regeneration, city-regional marketing, education and quality of life. Cultural activities contribute to the development of an environment conducive to a thriving business sector, helping to attract and retain the creative and innovative people and organisations needed to build the new economy. Their presence encourages inward investment and is therefore a spur for growth.<sup>35</sup>

Colston Hall, Bristol, the largest concert hall in the South West (Destination Bristol). The fourth Colston Hall was opened in 1951 to mark the Festival of Britain. The building's new foyer, seen in this photo, was completed in 2009.

With the rising population and a likely increase in disposable income and leisure time for many, there will be greater demand for such activities in the future. In addition, the increasing levels of obesity will put more pressure on sports facilities to encourage people to take responsibility for their health and fitness and to be more active.

The boom days of large-scale Lottery funding and major capital projects have probably gone for the present, so the priorities at this time are to continue making existing cultural building assets more robust in operational terms and, critically, to maintain funding for new activity that extends what those cultural assets are able to do.



Bristol Old Vic (BOV). Bristol Old Vic was founded in 1946 and is based in a complex which includes the Theatre Royal, the oldest theatre auditorium in the UK. Bristol Old Vic has a close working relationship with the acclaimed Bristol Old Vic Theatre School.

Collage created by pupils of Churchill Community School, North Somerset, as part of a programme of creative workshops run by visiting artists during the 2010 BAC celebrations, which were managed by Bristol Cultural Development Partnership (photographer Martin Chainey).



Dancers from the Lindy Hop Bop in Green Park Station during the Bath Fringe Festival, 2010 (photographer Chris Greenwood).

The Lido (restaurant, café and pool) at Clifton (Destination Bristol).

Watershed, a proactive venue on the Harbourside promoting creativity, innovation and talent through festival events, regular film screenings, the digital work of DShed and other activities (Watershed).





Environmental Initiatives

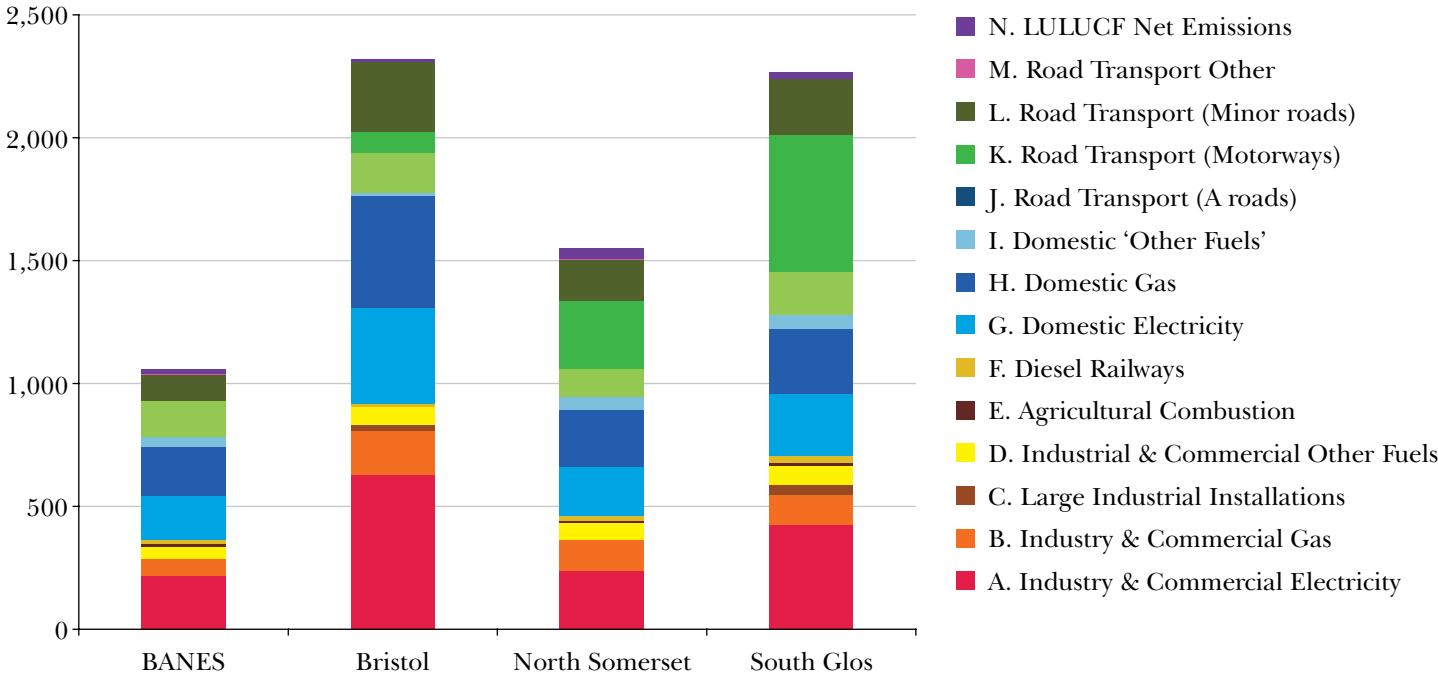
The West of England hosts more than 300 companies in the environmental technologies sector and Bristol aspires to be officially recognised as a green city.<sup>36</sup> Planned growth needs to be in sympathy with our green strengths and aspirations.

Initiatives in the city-region that aim to improve the environment and levels of sustainability include:

- Bath Farmers’ Market (founded 1997 under Local Agenda 21): promoting small-scale, less intensive production methods, reducing the effects of long-distance transport of goods and reducing packaging.
- Sustrans: a charity formed in 1983 to promote sustainable travel and whose projects include the 13-mile Bristol-Bath Railway Path.

- The CREATE Centre in B Bond Warehouse, Bristol: host to a range of environmental events and providing office space for environmental businesses.
- The Centre for Sustainable Energy in Bristol.
- Forum for the Future: a non-profit organisation working globally with business and government to create a sustainable future, whose chief executive is based in Bristol.
- Ashley Vale in Bristol: an award-winning self-build housing project under the Ecomotive Housing programme.

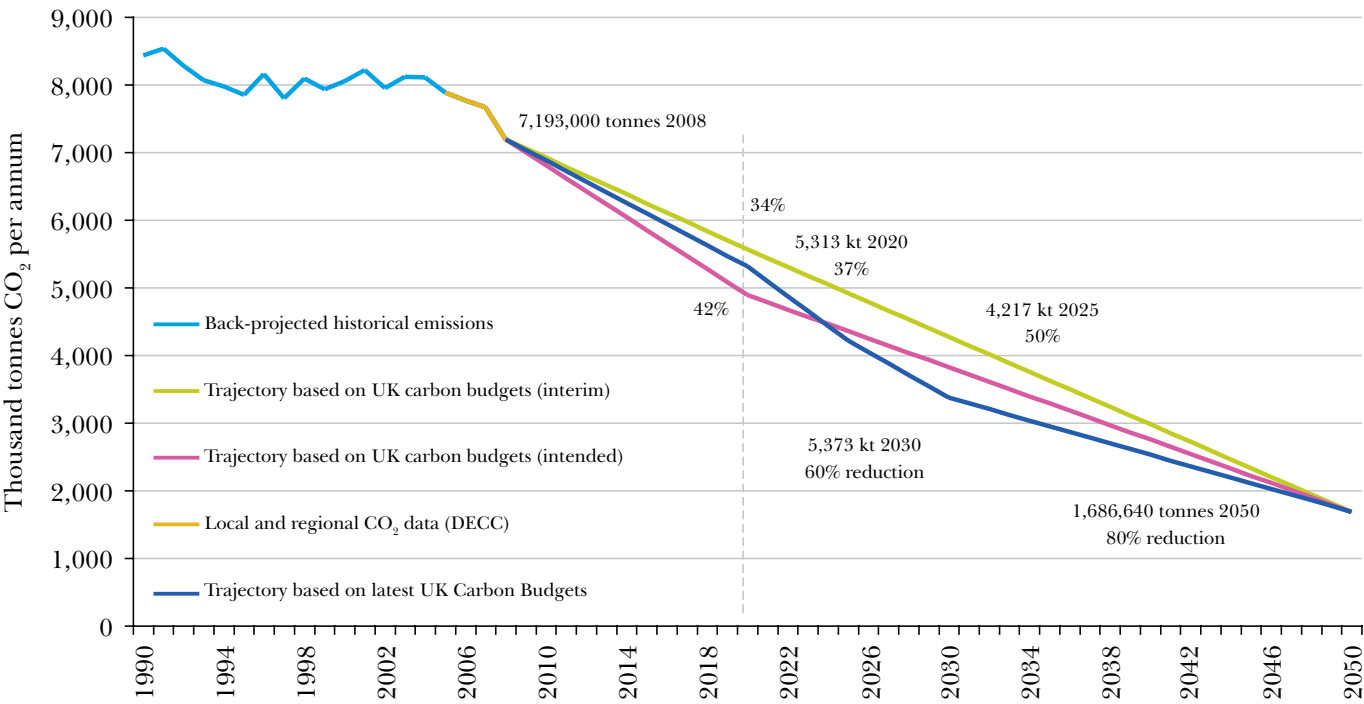
Any vision of the future of the city-region must take into account environmental concerns, including the UK’s legally binding greenhouse gas-reduction framework, and EU and international commitments to reduce greenhouse gas emissions.<sup>37</sup>



Opposite: Still from *Life in the Undergrowth*, Wildscreen 2006 Golden Panda Award Winner (BBC Natural History). A significant number of production companies specialising in wildlife films cluster in Bristol, benefiting from the presence of the BBC Natural History Unit and Wildscreen, a charity working globally to promote an appreciation of biodiversity and nature through the power of wildlife imagery.

Above: Graph showing total CO<sub>2</sub> emissions in the city-region in 2008 by local authority and source (created by UWE using data from the Department of Energy and Climate Change).

Below: Graph showing historic and predicted CO<sub>2</sub> emissions in the city-region (created by UWE using historical data from the Department of Energy and Climate Change with projections based upon the UK’s carbon budgets).





## Utilities in the City-Region

A reduction in the consumption of energy is already a priority for many in the West of England, aligned with the city-region’s green expertise. This includes introducing fuel-efficient transport, achieving a modal shift from cars to public transport, walking and cycling and encouraging low-carbon businesses and the growth of clean technology. More energy could potentially be generated within the city-region, for example through the renewable resources of wind and tidal power. In addition, while the two nuclear power stations at Hinkley Point on the Severn Estuary will be decommissioned by 2016, the possibility of a third power station being built there is under discussion.

Unlike electricity, there is currently no national grid in the water industry. Bristol Water supplies most of the city-region. The Severn (the UK’s longest river) is the company’s main source of water, capable of supplying more than half the area’s daily needs via the Sharpness Canal.<sup>38</sup> Wessex Water supplies water to the Bath area. Most of its supply comes from groundwater sources in Dorset and West Wiltshire, but it also purchases a bulk supply from Bristol Water to meet demand.<sup>39</sup>

Wessex Water is responsible for sewerage services across the city-region. Its two most significant treatment works are Bristol Sewage Treatment Works in Avonmouth (one of the largest in the UK) and Weston-super-Mare Treatment Works. The management of non-water domestic, commercial and industrial waste forms another significant element of the city-region’s utilities infrastructure and needs to be appropriate for planned levels of growth.

Two views of the Ecotricity turbines which currently supply half the energy needs at the Port of Bristol (Ecotricity).<sup>40</sup> The city-region is exposed to strong south-westerly winds which might be harnessed with more on- or off-shore turbines. The intrusion into highly valued and environmentally sensitive landscapes by the building of new energy-generation facilities will have to be weighed against the need for more and greener energy in the future.



## The Blue City-Region

The Severn Estuary is an important recreational and ecological asset for the city-region. The combination of an unusually wide tidal range of around 14 metres and proximity to significant population and industrial centres has also made it a focus for various proposals for harnessing tidal power dating back to at least the 1920s. The most recent was the Severn Tidal Feasibility Study, first announced in 2007. In 2010 the government announced that it did not see a strategic case for bringing forward such a scheme at the time.<sup>41</sup> Although it was felt an energy-generation scheme would benefit the regional economy, there were serious concerns about the loss of important natural habitats, the increased risk of flooding and the impact upon shipping and the port.

The Port of Bristol has the potential to access more wealth than the other 14 port regions within the Western Peripheral Areas that form the Atlantic Arc. As an international gateway, the port has a number of key advantages including:

- A deep-water container ship capacity that enables the handling of ships of up to 130,000 tonnes dead weight.
- A strategic location with a population of 42 million living within a 250km radius.
- Proximity to the consumer markets of the South West, South Wales, West Midlands and London.
- A dedicated motorway junction (Avonmouth and Portbury) and rail connection (Avonmouth and Royal Portbury).
- A 2,600-acre dock estate zoned for industrial use.
- The ability to handle a wide range of commodities including petroleum, fresh produce, gas, cement, scrap metals, containers, sand and gravel, grain, steel products and forestry products, as well as coal, the port’s largest cargo.<sup>42</sup>

Map showing the water depths of the Severn Estuary based on Admiralty charts (David Lock Associates). The city-region’s economic prosperity is partly reliant on the navigational channels being kept free from obstruction. The invaluable wildlife habitats of the estuary, which also need to be protected, include mudflats, sandflats, rocky platforms and islands.







Above: Aerial view of the port with the two Severn crossings visible in the distance (Bristol Port Company). The opening of the first Severn Crossing enhanced the city-region's connection to South Wales in general and Cardiff, its political and administrative capital, in particular. Before the building of the bridge, cars had to use the unreliable Aust Ferry, take the long road-route via Gloucester or be transported on rail trucks through the Severn Tunnel.

Left: Rock outcrops in Littleharp Bay, Clevedon, 2010 (detail) (© David P Howard under the Creative Commons Licence <http://is.gd/DUrl9w>). The more sedate Clevedon has a long, largely pebbled beach with numerous rock pools, while brasher Weston's sandy beach becomes a mile-wide expanse of thick mud at low tide. Having originally been developed with the coming of the railway, access to the two resorts as commuter towns, as well as visitor destinations, was improved with the completion of the M5.

Opposite: Aerial view of Clifton Suspension Bridge showing the muddy Gorge at low tide (Clifton Suspension Bridge Trust).

Severn Beach, north of the port, was once a popular weekend destination for Bristolians with a promenade, tea rooms and pier, but is now mainly thought of as one of the city's dormitory towns. On the other side of Avonmouth, industrial activity at the Portishead dock ended with the decommissioning of the nearby power stations and the dock was closed by the Bristol Port Authority in 1992. It has subsequently been converted into a 245-berth marina. Further south, Clevedon and Weston-super-Mare were developed as coastal resorts in the Victorian era. Much of Weston-super-Mare exhibits high levels of multiple deprivation and both towns are having to re-invent themselves as resorts in the light of the changing holiday market.

The principal river of the West of England is the Avon, which played a crucial role in the development of the city-region as a place of trade. It is an important conservation area for dragonflies, aquatic plants, rare fauna and flora and water birds, as well as being of geological significance. Man-made features of interest along its length include the Dundas and Avoncliff aqueducts, Claverton Pumping Station, Pulteney Bridge, various locks, Bristol Harbour, Clifton Suspension Bridge and Avonmouth Bridge. The Avon contributes to the attractiveness of the city-region and provides various recreational opportunities. It also presents a physical barrier that needs to be crossed without undue interference to river traffic. An average of 174,000 vehicles cross the Avon each day, of which around 12,000 use the Clifton Suspension Bridge.<sup>43</sup>







## Green Spaces

Pressure is increasingly being placed on England’s 14 Green Belts to accommodate the expansion of the country’s urban areas. The Green Belts were created:

- To maintain an area of open land around major urban areas and historic towns.
- To protect the countryside from further encroachments.
- To encourage urban regeneration of brownfield sites.
- To prevent the physical coalescence of settlements so they retain their distinctive nature.<sup>44</sup>

The Avon Green Belt, which incorporates parts of the West of England city-region, covers an area of 66,863 hectares.<sup>45</sup> Sections of green belt currently earmarked for development include those in the vicinity of the soon-to-be-expanded Bristol Airport and Royal Portbury Docks and the areas on the outskirts of Bristol and Bath that are being considered for new housing. It is inevitable that by 2050, the city-region’s green belt will have been significantly reduced as is reflected in the Basic Framework Plan used in the next section of this book.



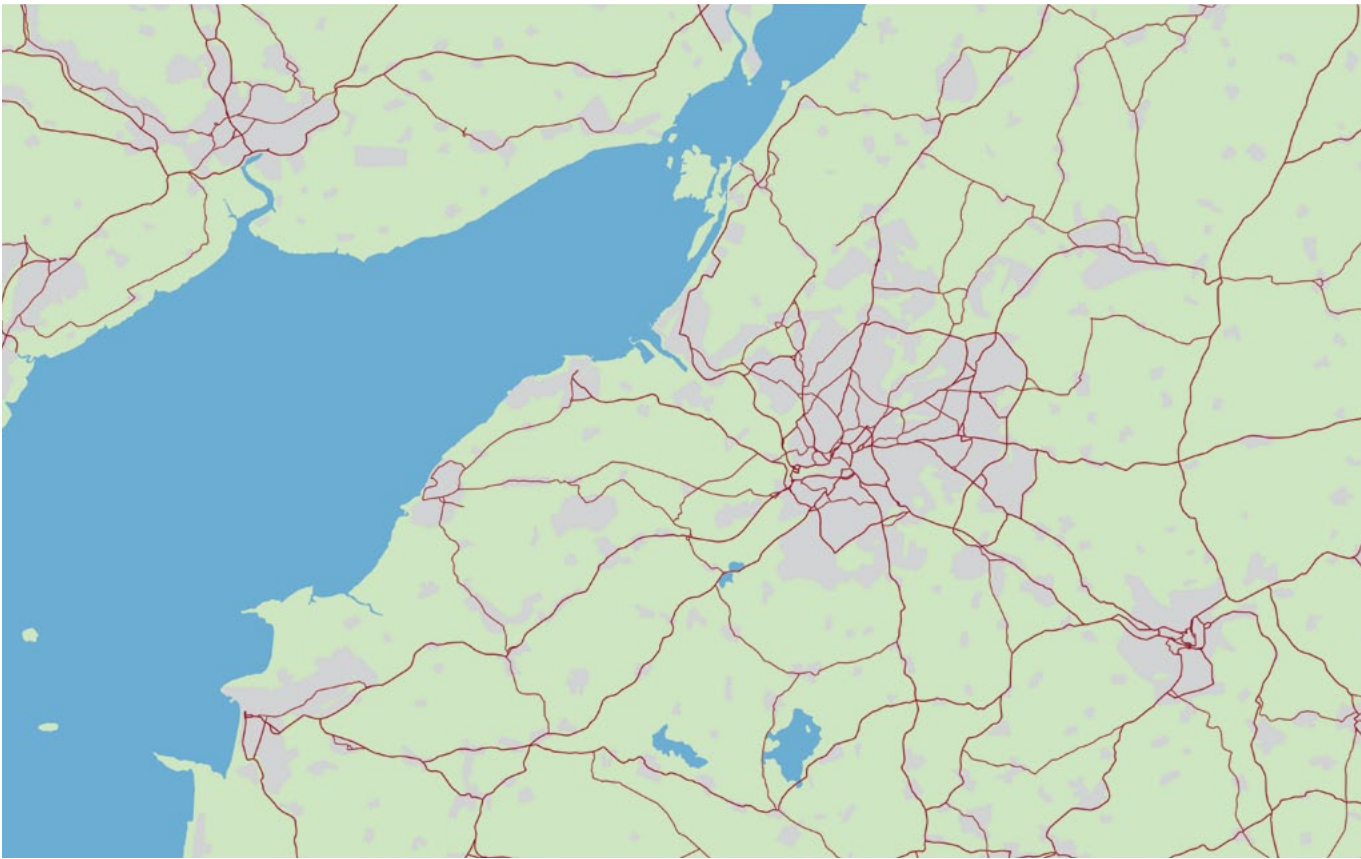
Opposite: Aerial photograph across Bristol showing the intimate relationship between the urban and the rural spaces (Destination Bristol). The West of England’s green and blue infrastructure is an integral part of the life of the city-region. The fields, rivers, estuary shores, woodlands and meadows, cities, towns and villages are not detached, self-contained places, but form layers in an integrated network.

Above: Simplified map demonstrating the location of significant wedges of green countryside running into the urban conurbation of Bristol (Alec French Architects).

In addition to their environmental, health and aesthetic benefits, green spaces are essential for food production. Globally, the food system has become overdependent on fossil fuels for energy, fertilisers and pesticides, packaging, distribution and storage, among other elements. This is unsustainable in the light of peak oil and the need to mitigate climate change; an alternative system is needed. Forum for the Future is currently applying for Lottery funding for support of Bristol’s aspiration to be one of the first sustainable food cities in the UK. There are also plans for a Lottery bid by Avon Wildlife Trust to establish ‘a large food-growing centre in north Bristol that will involve thousands of people growing and celebrating wildlife-friendly food’.<sup>46</sup> This is part of the Feed Bristol initiative.

Access to and from the food-producing parts of the city-region needs to be carefully considered within the strategy for improving connectivity in the West of England. Currently, the main barriers to more direct supply of locally produced food include the costs of transport and distribution and the lack of an effective network by which producers could avoid making lots of small, individual deliveries.<sup>47</sup>





Above: Map indicating the network of roads, lanes and bridleways connecting the urban and the rural in the West of England (David Lock Associates). The rural population of the city-region is particularly car-dependent and currently only 28 per cent of journeys to work are made by public transport, cycling or walking.<sup>48</sup> Generally, those who choose to live in rural areas and enjoy the benefits of country life would still like to be within 30 miles of a city.<sup>49</sup> Cities usually offer better health, job, education, retail, social, recreational and cultural opportunities. At the same time, many of those who have chosen to live in the city-region's urban areas appreciate having the countryside on their doorstep for the relative quiet, cleaner air, scenic vistas, wildlife and slower pace of life.

Right: On the Bristol-Bath Railway Path near Eastville, Bristol, 2010 (© Anthony O'Neil under the Creative Commons Licence <http://is.gd/wrA4ml>). This is one of numerous recreational routes in the city-region linking urban areas with the countryside. The routes also include The Avon Cycle-Way, the Community Forest Path and The Cotswold Way.



## SWOT Analysis of the West of England

### Strengths and Opportunities

- High levels of competitiveness and Gross Value Added (GVA) relative to other Core Cities and to the national average.<sup>50</sup>
- An economy that supports over 450,000 jobs.
- Forms part of the North-East Triangle, the most powerful economic zone in the South West.<sup>51</sup>
- Development potential of attractive business park sites in North Fringe adjacent to the motorways.
- Generally diverse and adaptable economic base without an overdependence on any one sector.
- High representation of growth industries.
- High skill levels of some of the workforce.
- A high proportion of knowledge-intensive businesses and a knowledge base that is growing above national average.
- A thriving university sector with four universities.
- Proximity to London, and access to South West and South Wales for work and leisure.
- International access provided by the port and airport.
- Excellent range of cultural, creative, leisure and recreational activities.
- National reputation for green initiatives including cycling schemes, walking routes and sustainable building design.
- Physically attractive.
- Ecologically important protected sites.
- Diverse and interesting heritage.
- Quality of life that attracts investment and people.<sup>52</sup>

### Weaknesses and Threats

- Restricted by relatively small size and peripheral location within the UK and in relation to Europe.
- Limited brownfield land available of the scale, location and quality required for new developments.
- Large areas at risk of flooding.
- Imbalance between the demand and supply of all types of housing.
- Increasing disparity between earnings and house prices.
- Emerging shortages of suitable existing business sites and premises.
- School examination results below national average in some areas.
- Shortages of skills in some work sectors.
- Net exporter of graduates.
- Pockets of intractable deprivation and worklessness.
- Polarisation of separate sectors of society.
- High levels of traffic congestion.
- Inadequate and expensive public transport system.
- City-region rail network already at capacity at peak times.
- National rail network links in need of upgrading.
- Limited international business flights from Bristol airport.
- Lack of major conference venue.
- Dependence on political will of four local authorities to develop major cross-regional infrastructure projects.





# The West of England City-Region: Where we will be

We believe that the West of England should aspire to be an even more attractive place in the future than it is today, with everyone having the opportunity to live full, creative and healthy lives. This entails a combination of quick-win, low-key projects, long-term programmes, major showcase projects and fundamental changes to the governance and infrastructure of the city-region.

View towards a reconfigured Cumberland Basin from Clifton Suspension Bridge along the non-tidal water of the Gorge (detail) (Alec French Architects).



# The Basic Framework Plan

## The key guiding principles identified already for fulfilling the 2050 vision are:

- Sustainable communities with good employment opportunities, high quality and varied housing and easy access to an efficient and comprehensive public transport system.
- A flexible education system meeting the needs of all through a variety of delivery methods.
- A varied range of satisfying, well-paid jobs at all levels, appropriate for likely changes in the nature of work and in patterns of employment.
- An overall reduction in greenhouse gas emissions of at least 80 per cent by 2050, achieving if not exceeding the government’s target in the Climate Change Act (2008).<sup>1</sup>
- The rebalancing of North and South Bristol.
- A high-quality public realm.
- Effective governance and strong leadership.

These principles should be widely accepted, even though they are highly ambitious, because they are non-contentious. They have been helpful in shaping the Basic Framework Plan used in this section of the book and in conceiving the proposals that follow. Some inform the way the structure of the city-region is assessed and help to prioritise the changes to be made. Others inform the way the city-region is inhabited, its potential cultivated and its quality of life improved. Some have had little discussion in the consultation process to date and are therefore mentioned only briefly in this book. All require further in-depth analysis to assess the best way of achieving them in line with our expanding knowledge of our strengths and weaknesses and the drivers that act upon us, as well as our increasing understanding of the needs of the city-region.

What we know already is that to grow the West of England in accordance with these guiding principles, the city-region must be viewed in terms of *actual* patterns of living rather than with ingrained ways of thinking that can obscure the new reality. For the purposes of our provisional plan, this new reality has been broken down into four layers.

The first layer is formed by the city-region’s green landscape, its areas of water and its urban space. The green and blue infrastructure comprises parts that are in need of special protection (as outlined in the previous section) and parts which have a greater potential that needs to be developed in the years ahead (for example, the Avon Gorge and estuary shore as discussed later in this section). There will be links to green and blue infrastructure further afield that need to be maintained. This green and blue infrastructure provides the setting for the city-region’s network of places to live and work. It is a relationship of mutual dependence and complementarities.

The second layer is formed by the multiple centres of strategic importance. The West of England is poly-centric with several important magnets for employment, culture, recreation and other activities. Not all of these relate to the historically recognised centres of the past. Some already draw significant numbers of people and patterns of movement from across the city-region and beyond; others are developing their strategic importance or can be encouraged to do so.

Current major attractors are:

- Bristol city centre: employment, retail, culture, sport and higher education.
- Bath: culture, employment, retail, sport, leisure activities and higher education.
- Bristol’s North Fringe: employment, retail, higher education and transport.
- Cribbs Causeway at Patchway: retail.
- Avonmouth: employment.
- Bristol airport: people and airfreight.

These are the places upon which the city-region’s transport systems and other forms of infrastructure need to be focused, combining micro-interventions at the local level with an understanding of how they can be coherently connected at the regional level and for the longer term. Among them are areas that were initially planned and treated as out-of-town or edge-of-city developments, like the Aztec West business park in the North Fringe, which are now embedded in the conurbation but lack the attributes normally associated with a fully functioning town centre.

The first layer: consolidation plan of existing patterns of human settlement, strategic green and blue infrastructure and the floodplains, which provides a foundation for the Basic Framework Plan for the city-region (Alec French Architects).



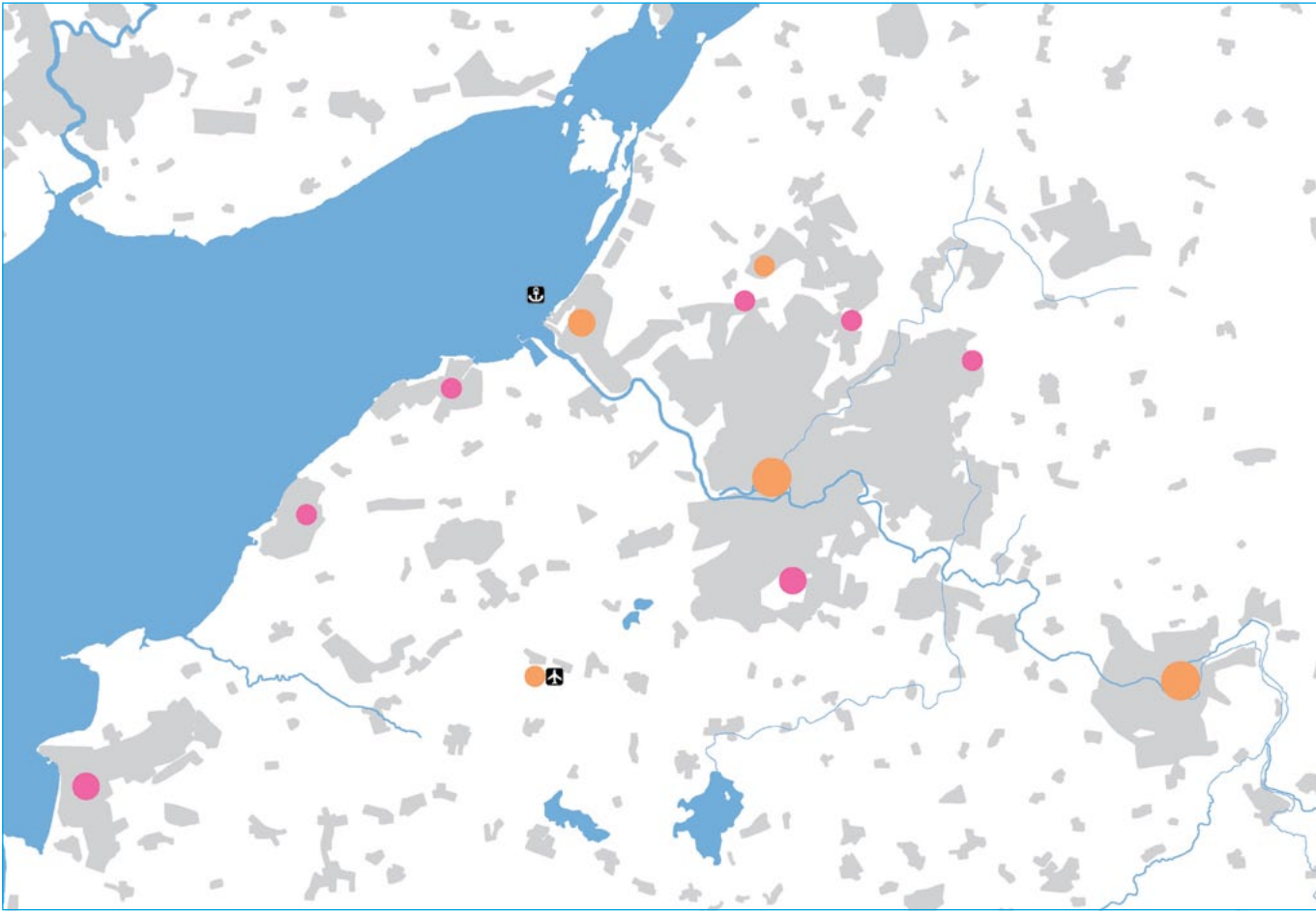


Areas that are developing as attractors, or can be encouraged by better connectivity to do so, are:

- South Bristol.
- Bristol's North Fringe including UWE.
- Weston-super-Mare, Clevedon and Portishead: recreation, leisure and commuter homes.
- Parkway in South Gloucestershire.
- Emerson's Green and the SPark science park.
- Weston airport.
- Filton airport.

The importance of these places needs to be recognised so that they can be comprehensively integrated into the strategic transport network and supported in their ambitions for additional investment and economic growth. They have potential to concentrate and diversify further, thereby increasing the sustainability of the whole city-region. Improving accessibility to South Bristol is seen as key to better employment opportunities.

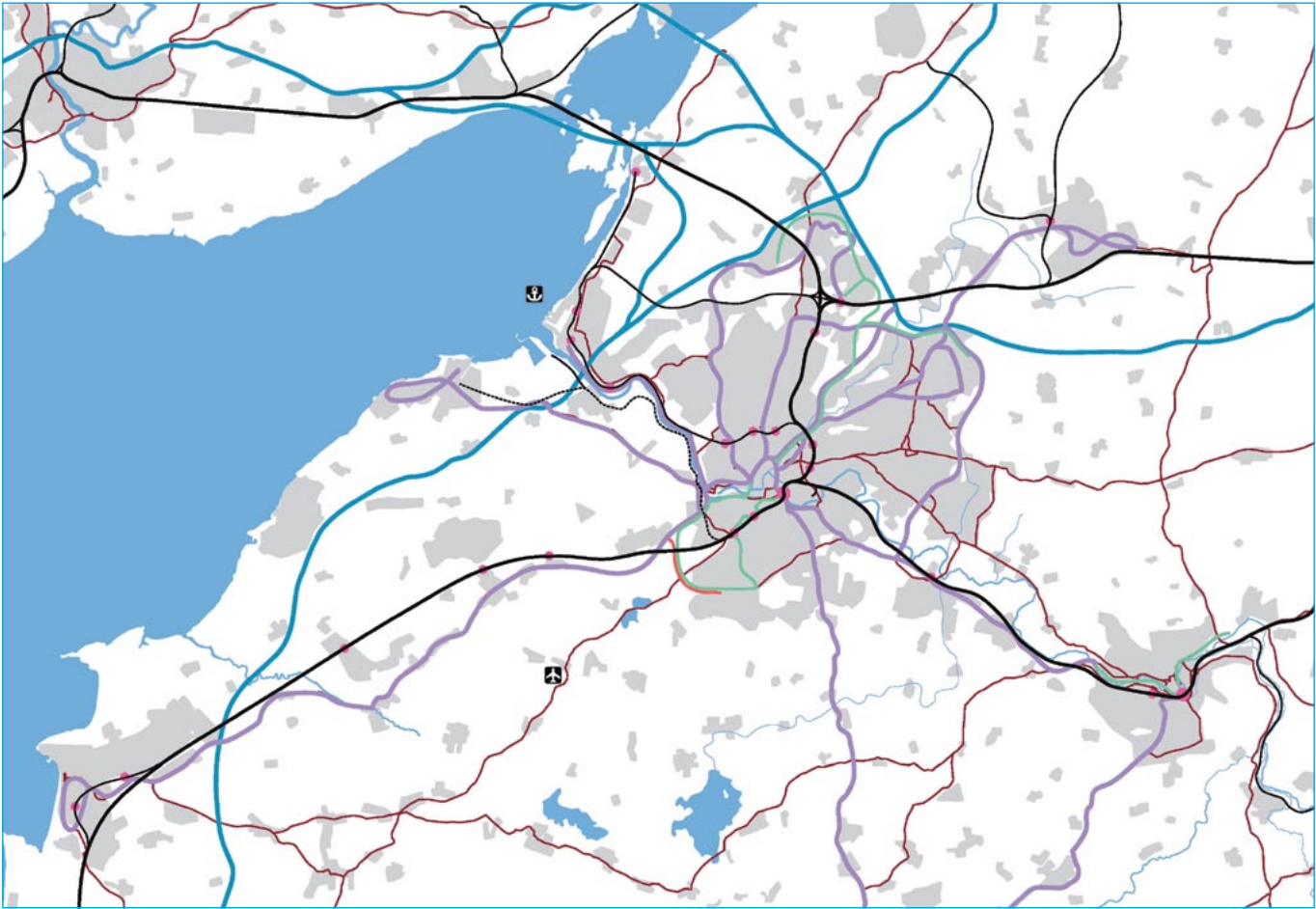
The second layer: plan indicating the existing centres of attraction in the city-region (in orange) and areas that are developing – or could be developed – as attractors (in pink) (Alec French Architects).



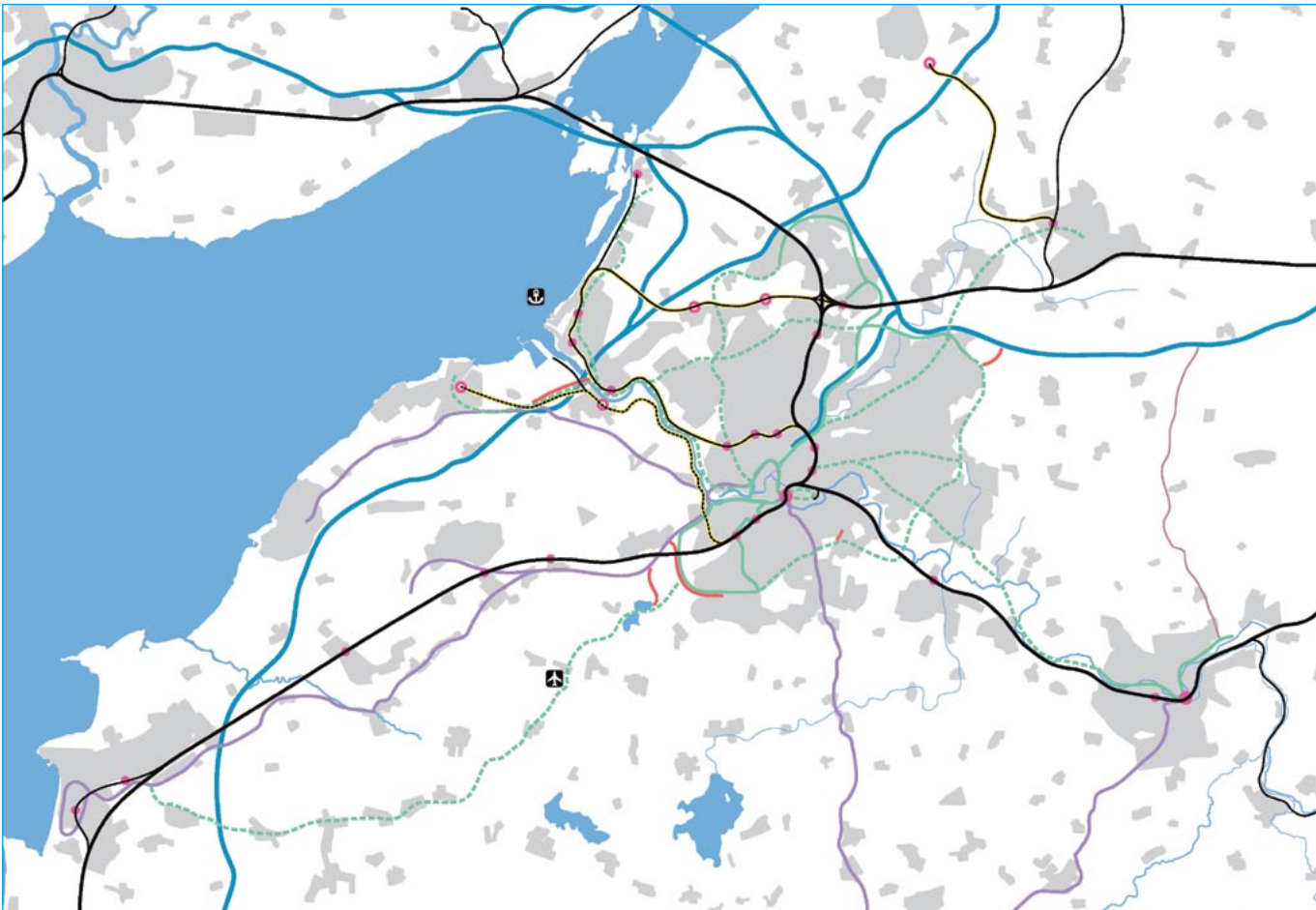
The third layer is formed by the existing strategic transport links, which help to shape and hold together the city-region.

The third layer part one: plan indicating the existing and planned transport network of the West of England with the showcase bus routes (purple), planned Rapid Transport (green), planned new road (red), existing rail lines with potential (dotted black line) and existing stations (pink dots) (Alec French Architects).

- Showcase Bus Routes
- Planned Rapid Transport
- Planned Road
- Existing Rail Lines with Potential
- Existing Stations





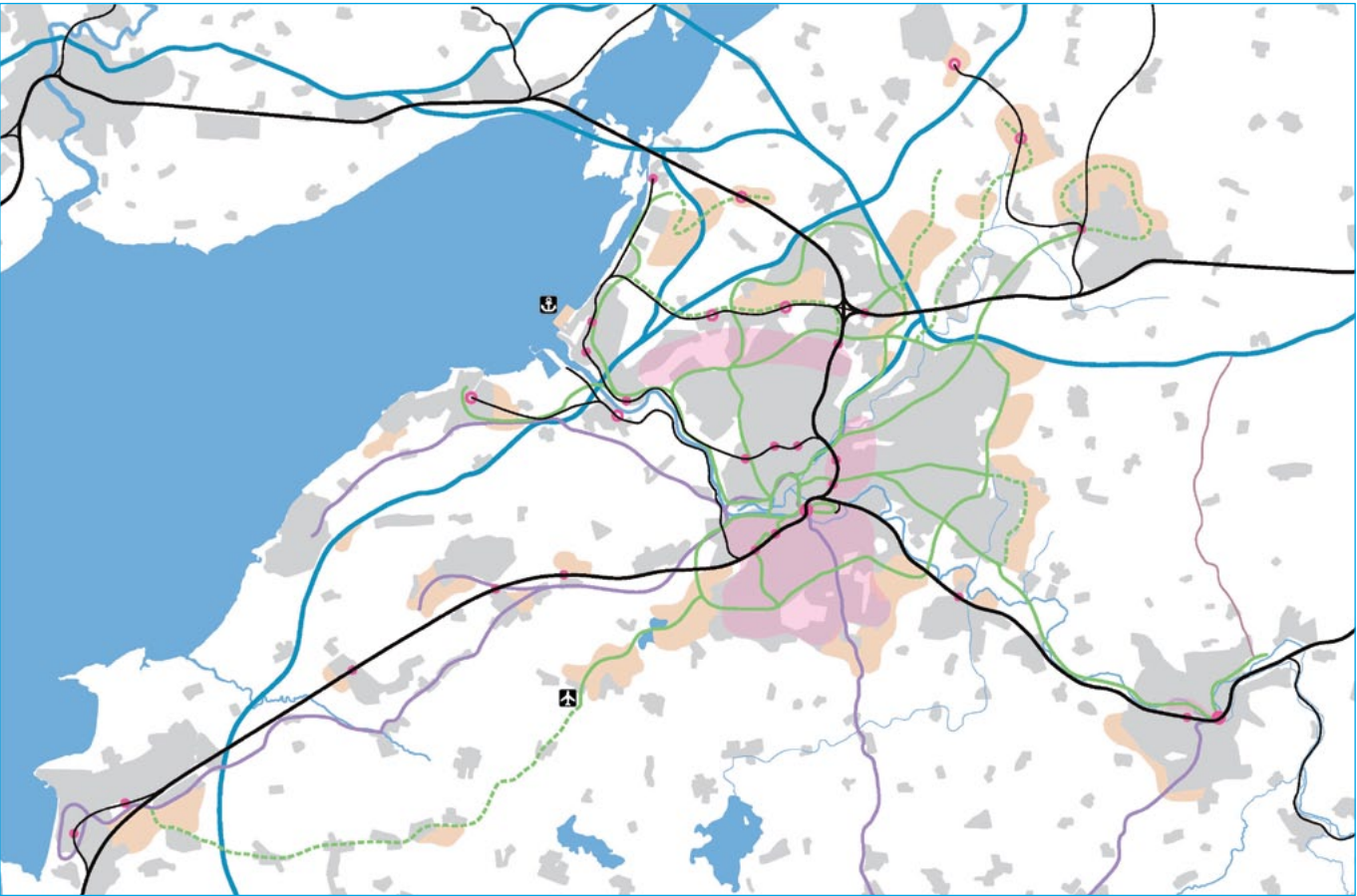
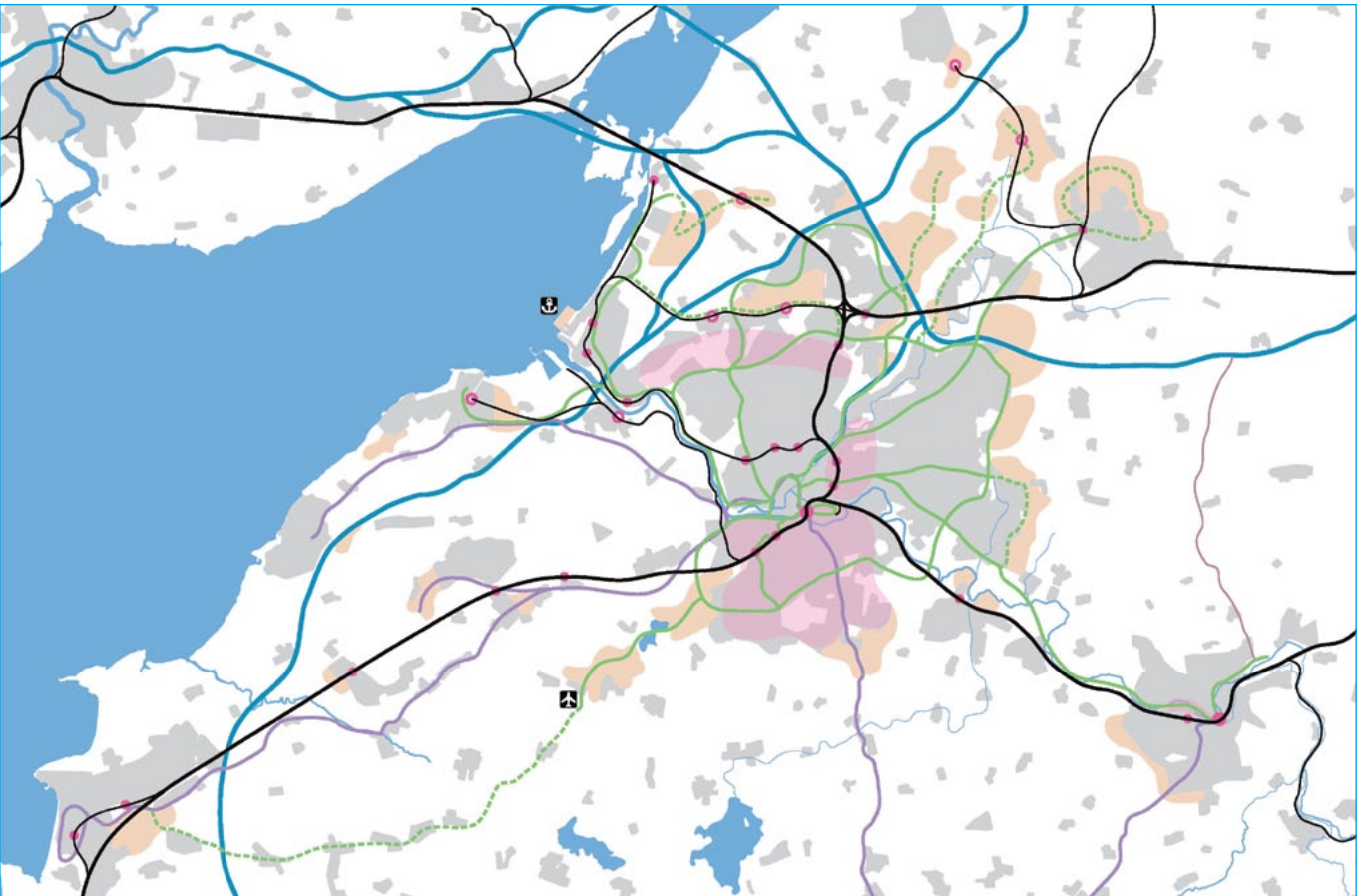


The fourth layer is made up of urban areas likely to experience regeneration and of green areas likely to become urbanised. The precise detail of this pattern might change from current predictions as a result of further research and community consultation, but weight has already been given to the environmental protection zones and convenient (non-car) travel distances to places of employment. New urban development has to be connected to high-quality public transport options, either reinforcing the existing infrastructure or planned hand-in-hand with new infrastructure investment. New economic, healthcare and educational nodes should also be a key feature of new urbanisation, exploiting opportunities for clustering such destinations in or near places accessible to the major population catchments. New settlements would also benefit from proximity to high-quality landscape, including new woodlands and water features.

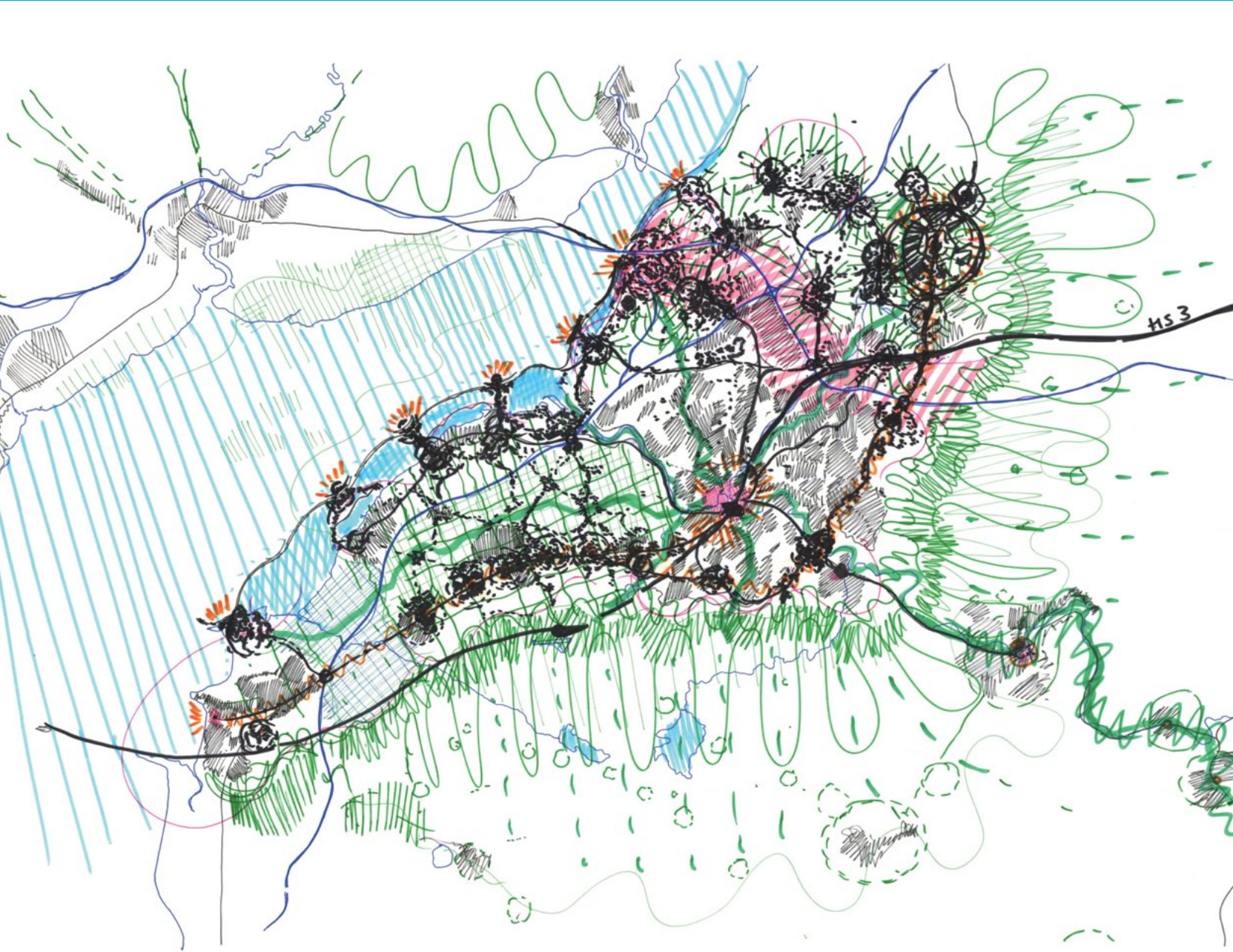
Above: The third layer part two: plan showing an extended and enhanced transport network for the city-region with additional key bus routes (purple) proposed Rapid Transport (dotted green), additional road links (red), enhanced rail (yellow) and proposed stations (pink circles) (Alec French Architects).

Right: The fourth layer: plans showing areas of current or planned urban regeneration (pink) and two alternative proposals for redevelopment and additional regeneration by 2050 (beige) (Alec French Architects). See key below.

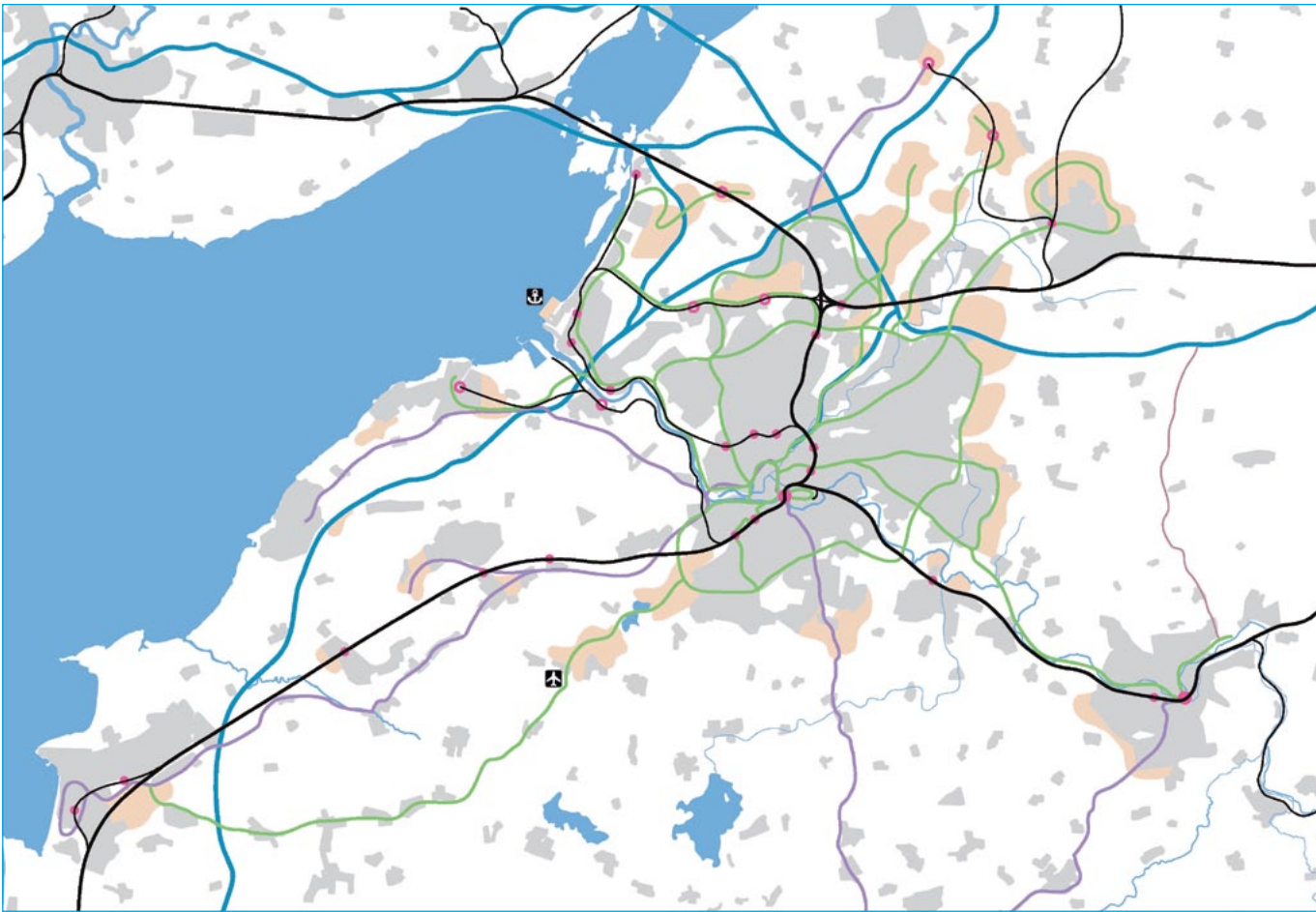
- Rapid Transport
- - Extended Rapid Transport
- Additional Key Bus Routes
- Areas of Urban Regeneration
- Areas of Potential Development







Initial workshop sketch of what has become, after further analysis and consultation, the Basic Framework Plan for the 2050 vision (David Lock Associates).



Combining these four layers creates the composite Basic Framework Plan, which provides the foundation for the 2050 vision.

- Rapid Transport
- Additional Key Bus Routes
- Areas of Potential Development

It would be premature to set out in detail all aspects of the Basic Framework Plan and how these might relate to other, non-spatial elements of the 2050 vision, but the following provides some examples of the 'big ideas' that are already under consideration.

Basic Framework Plan for the 2050 vision (Alec French Architects).



# Rebalancing North and South Bristol

The rebalancing of North and South Bristol has been a critical factor in the spatial reimagining of the city-region for 2050. One part of the conurbation is currently overheated, sucking in people to work from further and further away – people who make their daily journeys mostly by car – while the other is underemployed and disconnected.

High-tech and knowledge-based industries have been increasingly drawn to the North by the advanced engineering of the aviation industry that has been based there since 1910. Transport connections were improved with the opening of Bristol Parkway station (on the London-South Wales rail route) in 1972 and the M32 link between the M4 and the city centre (completed in 1975). The economic competitiveness of the industries of the North needs to be fully exploited and more affordable homes need to be built close to key areas of employment everywhere to redress the current imbalance between housing and jobs. This has to be achieved with minimal impact on the local environment, which is already feeling pressure from the rapid expansion of recent years.

At the same time, the quality of the life of the South needs to be improved to rectify the current social imbalance between the two poles. In parts of Filwood, Knowle, Windmill Hill, Hartcliffe, Hengrove Park and Withywood, residents have become disconnected from the city's infrastructure economically, physically and socially. The area has some of the most significant concentrations of multiple deprivation in the city-region and some of the most deprived wards nationally.<sup>2</sup> Transport links in all directions are poor, particularly for those without access to a car. This could be addressed by the introduction of the Rapid Transit public transport system and the completion of the existing link route around the South, which are being considered as part of the 2050 vision.

The new economy of the North Fringe is currently inaccessible to many of those in the South, not only

in transport terms but also in terms of employability. The low levels of educational attainment and personal ambition mean that the prospect of getting a job in the high-skilled, innovative industries located in the North seems unattainable. Tackling worklessness throughout the West of England must be a key focus of the 2050 vision. Assuming the same ratio of claimants to population as at present, the number of claimants will rise to around 133,000 by 2050 unless effective measures are taken. It is estimated that the current annual cost of worklessness in the city-region is around £255m. If the proportion of economically inactive people of employment age is unchanged by 2026, then the cost of worklessness will be around £420m and in 2050 the cost is likely to be over £1bn.<sup>3</sup> There is also the significant non-fiscal cost to consider in terms of personal and social deprivation. Worklessness can be reduced by 2050 by improving connectivity, giving people the ability to travel more easily to areas of employment, and also with the adoption of an improved skills and education system, giving people the ability to apply realistically for jobs.

Although examination results show that the current education system serves many of the West of England's children well, too few reach the minimum standards expected of a thriving city-region. Substantial sums have already been spent in various attempts to engage, inspire and instruct those children who are currently slipping through the net, with mixed results. More radical steps are needed to develop and deliver a new vision for education and a greater commitment to investing today in the future of our young.



Storyboard created as part of the 'South Bristol Economic Study' presentation, 2010 (Business West).

One such concept worth pursuing is that of the urban village school model put forward by the visionary educationalist James Wetz. Employing principles of human-scale education, some of the large, underperforming secondary schools in the West of England could be replaced by smaller schools of around 375 pupils, with teachers teaching no more than 75 pupils a week (compared with the current average of 250). This will improve the teacher-pupil relationship – research has shown that teachers can teach pupils more effectively if they know them well – and the sense of community and educational commitment within the school. Every pupil will have the support of a personal attachment worker who will also make links to families and carers to strengthen that support (this one-to-one mentoring,

while expensive to provide, produced significant benefits to the young in the Education Unlimited programme). The school day will run from 10.00am to 6.00pm to best match the biorhythms of adolescents and all work will be done in school, guided by teachers, rather than relying on homework.<sup>4</sup> The individual schools may cluster together as appropriate to achieve economy of scale. Such a radical initiative will entail a substantial building programme and the cost of retraining some teaching staff, but considerable savings – in social and economic terms – will be made in the future.

Although Wetz concentrated on the secondary school system, which is of considerable concern in some areas of the city-region, the concept could be extended to the primary age with small schools providing education in a familiar, community-focused environment from five to 18. This could be particularly beneficial to those



young people who currently lack the support of loving and informed parents/carers, although, of course, the identification of those at risk will require sensitivity. It would also be detrimental if children who attended such schools were labelled as potential failures requiring special measures.

This new form of education might, if successful, only be required for the interim of 30 years or so. By 2050 the new generation of parents/carers, having enjoyed a beneficial education experience of their own, will be able to provide the necessary guidance to their children that so many are missing out on today.

As well as ensuring that future generations of young people will never again be allowed to drift or drop out of the education system, lacking even the basic levels of literacy and numeracy needed to function effectively in the adult world, schools should also be engaged in a concerted effort to counter the rise in heart defects, obesity, asthma, diabetes and other chronic illnesses that can be exacerbated by poverty, a lack of awareness and poor self-esteem. Investment in health education for all ages will pay off in the future in a reduction in healthcare costs and a more energised, reliable workforce, as well as a more enlightened, caring population. It will also eradicate the current shameful differences in life expectancy across the city-region.

It is difficult to link school education directly to the employment market as we do not know precisely what future jobs will be like and what skills will therefore be required. Even today, it is impossible for schools to keep pace with the rapid changes in the technological needs of industry – for example, providing the practical skills required for new employees to be able to move straight onto the shop-floor. However, what employers are always going to need are young people who are willing to learn, to be reliable and to be committed to doing their best. They want well-rounded, emotionally mature individuals; a mixture of executive high-fliers, innovators, team leaders, team players and solid core

workers. They need young people with ‘attitude’, as one set of SME owners put it. Schools should be well placed to provide these types of recruits. Further and higher education organisations would also welcome such applicants. In addition, universities are looking for those who can manage independent – rather than drip-fed – learning and who are mentally equipped to adjust to the discipline and abstract thought required at degree level.

As well as improving the knowledge and skills – and therefore the prospects – of the people of South Bristol as part of the city-region’s fresh approach to education, and improving connectivity to enable them to travel easily to places of employment, more jobs could be developed in the South and in adjacent areas such as St Philips Marsh to reduce the need to commute. This could partly build on the existing local employment growth in the health sector at Hengrove Park, but also bring in new opportunities for skilled, higher-paid work in, for example, the expected growth sectors of advanced manufacturing, digital media and low-carbon goods and services. Companies are more likely to relocate here if they are confident of attracting local employees with the relevant skills and education levels and if the appropriate infrastructure is in place for development. This will entail marketing the area effectively to dispel long-held negative perceptions.

## Design and Density of New Housing



Illustration from the original proposal for the Bath Western Riverside development (architects: Feilden Clegg Bradley).

### Existing urban areas

To meet the anticipated need for new housing and employment, our first consideration has been to look at opportunities to increase both within existing built-up areas. Bath Western Riverside is part of a larger regeneration area in central Bath. In Bristol we have, as examples, looked at the very significant opportunities offered by St Philips Marsh and the areas around Cumberland Basin (see below).

The illustration shown here, prepared for a site in Ashton Gate Bristol, is indicative of the sort of new housing that could be developed on sites such as this, currently used for warehousing and distribution and within walking distance of the city centre. It is an example of the redevelopment of an inner-city site for a wide range of uses, including innovative housing and workspace, commercial and leisure space, shops, restaurants and an energy centre.



These proposals demonstrate the potential for the delivery of an inner-city sustainable community. Based around a strong urban design strategy of streets and places it creates good public and private realms, whilst offering a strong mix of development delivering: 256 apartment dwellings, 54 three and four bed-houses, 11,000m<sup>2</sup> of commercial space in a mix of unit sizes, and associated public realm and community spaces. On-site energy generation involves a community energy centre, supplemented by solar hot water and PV installations on individual dwellings.

### Urban extensions and new communities

It is widely accepted that the overall quality of much new housing in the UK in recent decades has been inadequate. Whilst meeting some of the aspirations of the 'suburban dream' – detached houses with gardens – these estates often lack essential amenities, attractive communal green spaces and any real sense of place, and are heavily dependent on the use of the car. More imaginative thinking can address these issues whilst retaining the positive aspects of suburbia.

Research has shown that increasing densities from the current UK net average of 25 dwellings per hectare (dph) to a net density of 50 dph can allow the creation of a 'walkable garden suburb'.<sup>5</sup> This not only allows a maximum walking time of ten minutes to efficient public transport, but also increases the range of local services and retailing and allows the creation of a network of shared green spaces for recreation, rainwater management and biodiversity.

Such characteristics are a part of the overall 2050 vision of strong, sustainable communities, attractive places and far greater reliance on good quality public transport.



Examples of walkable suburbs (Richard MacCormac for MJP architects).



Proposal for Ashton Gate site (Ferguson Mann Architects with Quattro Architects).







Examples of good-quality, low-energy, family housing in city and rural locations: Accordia, Cambridge (left) and Frome, Somerset (right) (architects: Feilden Clegg Bradley; photograph of Frome site by Tim Crocker).

Allowing for local centres including shops, schools, health centres, etc, shared public spaces, parking for cars that may still be required for occasional use and variations in density, we have conservatively worked to a gross average density of 35 dph in our calculations of areas required for new suburbs and new communities.

These communities – and existing communities – will also benefit from better access to employment, education and recreation by safe direct walking routes and cycling networks – all promoting active travel.

All new housing will need to conform to the highest levels of energy efficiency and to at least the design standards embodied in ‘Building for Life’.

## Existing housing stock

Bristol benefits from having a considerable quantity and range of housing close to the city centre and areas of employment and recreation. Bath currently has a shortage of appropriate housing within its urban area, which it is addressing.

While much of Bristol’s housing has proved very adaptable, there are significant areas where poor layout, inappropriate forms, low density and lack of local services all need to be addressed as part of the 2050 vision. The example of Inns Court illustrated here is a study of regenerating a part of Knowle West in South Bristol. It shows the potential for removing unsatisfactory aspects of the existing layouts and for creating high-quality shared spaces, while recognising the extent of owner-occupation and the strong will of the community to enhance what they value.

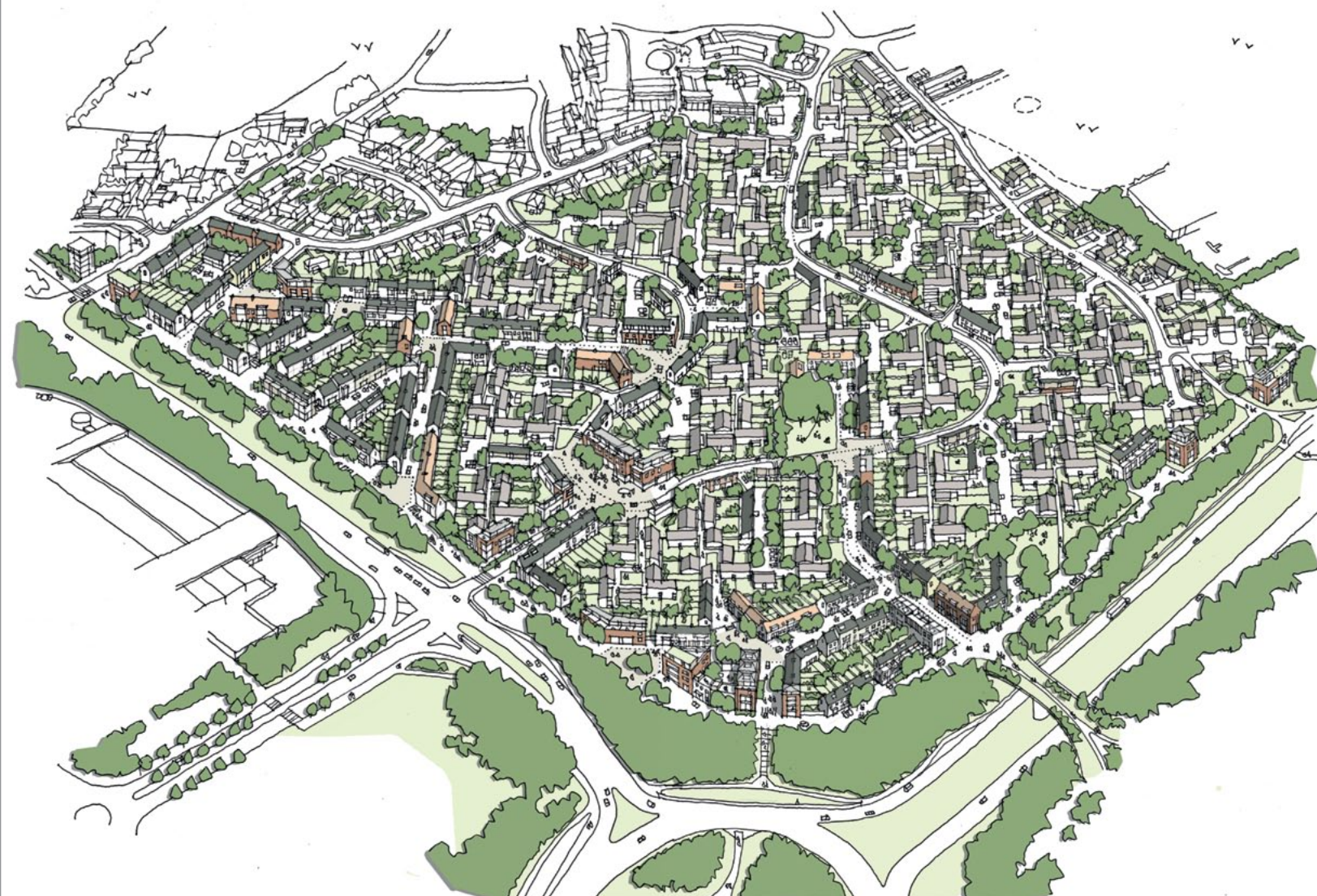
This plan maintains the aspiration to deliver major new housing sites (of interest to national housing providers) in addition to significant new smaller infill-housing sites within the estate. These smaller sites are delivered through the redevelopment of problem garage courts, transformed into formal mews developments. New housing terraces create street frontages to the main circulation routes. These are currently not overlooked, and hence rather insecure. New, more intimate, community spaces are created that are overlooked, more manageable in terms of maintenance and offering hubs around which the new streets and spaces are arranged.

Proposal developed for the Inns Court housing area of Bristol with the Knowle West Residents Planning Group, demonstrating a strategy for the delivery of 2,000 new homes with little demolition and disruption within the existing community (Ferguson Mann Architects in association with FIT Architects).

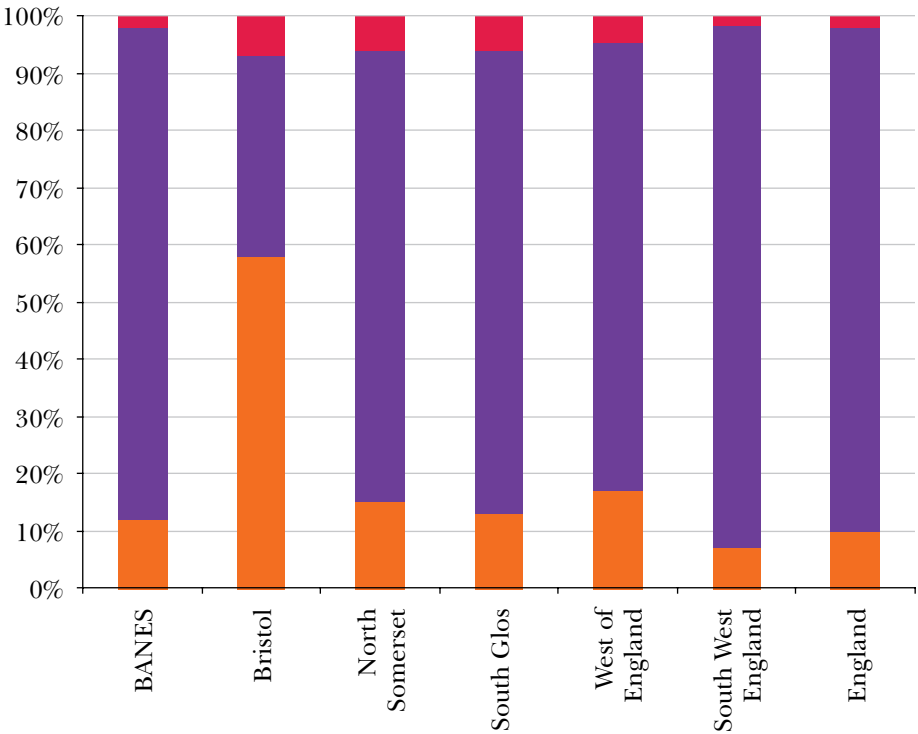
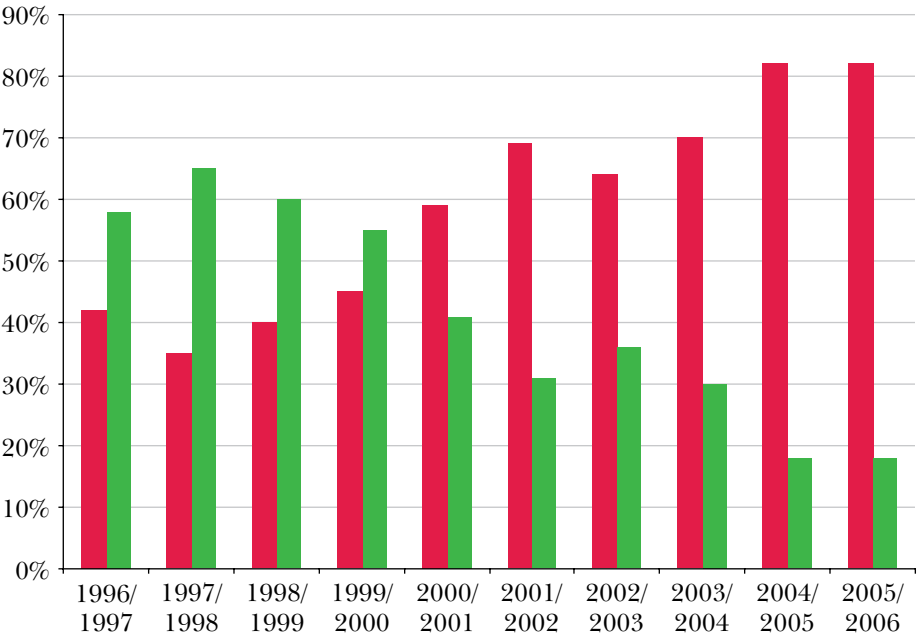
## Making the most of brownfield land

The spatial element of the 2050 vision includes making the most of brownfield land that is currently underutilised to minimise the impact of growth upon our green spaces. Within Bristol and Bath there are significant urban areas where activity has ceased or where current users are likely to relocate over the next 40 years, including old railway yards and manufacturing sites.

St Philips Marsh on the edge of Bristol city-centre has been used as a case study for the purposes of this book. This area of 104 hectares currently provides accommodation for a number of support functions for the city, including the wholesale Fruit & Vegetable Market (a key component of city-regional food distribution). It is a significant area close to central parts of the city. As such it is a natural location for new living, working and recreation as existing uses are relocated or change.







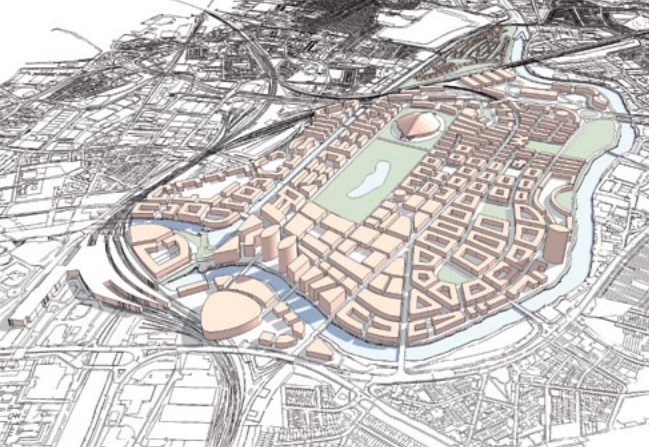
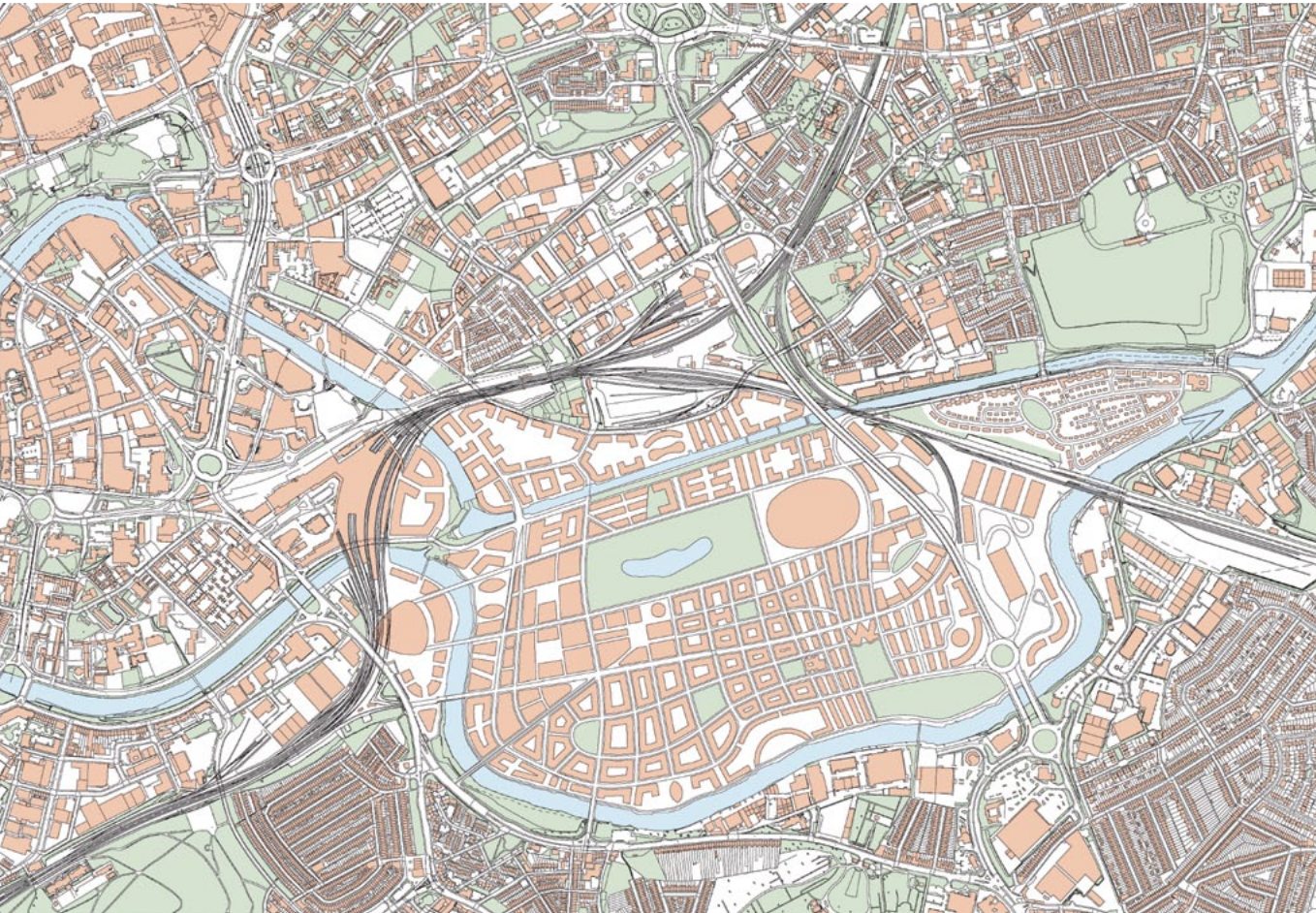
■ Brownfield  
■ Greenfield

Graph showing the percentage of gross dwellings built in the West of England on brownfield and greenfield sites between 1996/97 and 2005/2006 (based on information from the West of England Partnership).

■ Land as water  
■ Land as greenspace  
■ Land developed, including gardens

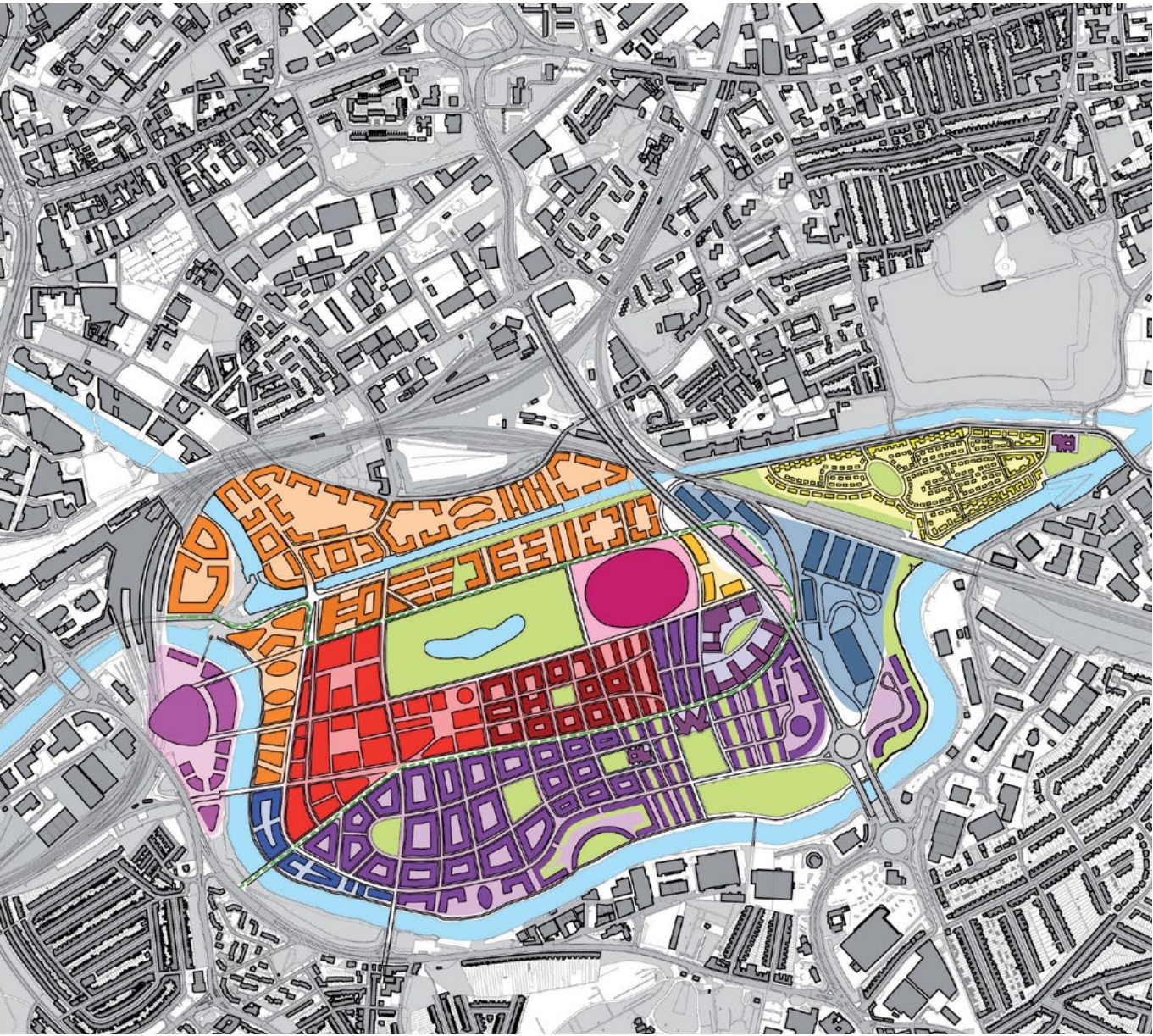
Graph showing the percentage of land-use by type in the West of England in 2005 (based on information from the Generalised Land Use Database).

A new location for the market is shown in the indicative plan reproduced here, which would then allow the creation of a coherent new quarter linked to the city centre. This area would also benefit from the proposed non-tidal river (as described below), providing both an attractive amenity and easy water-taxi access to other parts of the city. The indicative plan shows approximately 9,800 dwellings, a mix of workspace types of approximately 270,000 square metres, a new extension to Temple Meads station, new primary and secondary schools, a significant retail area, a new park and a velodrome. Such proposals can provide significantly higher levels of employment than at present.



Above: St Philips indicative master plan (Alec French Architects).  
Left: St Philips perspective view (Alec French Architects).





- Village area: 80,000m<sup>2</sup>; Gross density per hectare: 40; Dwellings: 320

Transport Interchange; Exhibition and Conference Center; Total area: 21,000m<sup>2</sup>

Retail 49,500m<sup>2</sup>; Assumed storey height: 2 storey; Total area: 99,000m<sup>2</sup>

Office/Apartments: 522,000m<sup>2</sup>; Assumed storey height: 6 storey (including 2 No 20 storey blocks); Assumed 50:50 Office:Apartments; Total number of apartments: 3,200

Residential: 70,000m<sup>2</sup>; Assumed storey height: 4 storey (plus 1 No block at 20 storey); Total area: 298,000m<sup>2</sup>; Total number of apartments: 4,950; Total number of townhouses: 155

Specialist Retail/Apartments: 12,500m<sup>2</sup>; Assumed storey height: 6 storey (1 storey retail, 5 storey apartments); Total area: 12,500m<sup>2</sup> & 62,500m<sup>2</sup>; Total number of apartments: 765
- Education: 35,000m<sup>2</sup>

Wholesale Fruit and Vegetable Market; Warehouse/Manufacturing; Total area: 19,500m<sup>2</sup>

Studio: 8,000m<sup>2</sup>; Assumed storey height: 6 storey (1 storey retail, 5 storey apartments); Total area: 8,000m<sup>2</sup> & 40,000m<sup>2</sup>; Total number of apartments: 495

Hotel: 3,500m<sup>2</sup>; Assumed storey height: 6 storey; Total area: 21,000m<sup>2</sup>

Velodrome: 24,000m<sup>2</sup>

Rapid Transport Route
- St Philips notional zoning diagram (Alec French Architects).

Carbon reduction

Another, increasingly critical factor is the need to tackle carbon reduction in existing dwellings. Currently homes are responsible for around 27 per cent of the UK’s carbon dioxide (CO<sub>2</sub>) emissions.<sup>6</sup> For the type of high-quality new-build we envisage in our future vision, the highest environmental standards will be enforced. However, it is estimated that 80 per cent of the housing stock in the city-region that will be in use in 2050 has already been built.<sup>7</sup> Therefore, there is a need to assess the energy efficiency of existing dwellings and carry out retro-fitting to bring properties to the standards required to achieve the national target of a CO<sub>2</sub> reduction of 80 per cent.<sup>8</sup> Improving household energy efficiency will also contribute to the reduction of fuel poverty, which is experienced by those who spend more than ten per cent of their net income on fuel.<sup>9</sup> Forum for the Future has recently announced the Refit West Project, which aims to retro-fit 1,000 private homes in Bristol by 2011.<sup>10</sup> The private sector is a priority as it accounts for 93 per cent of the city’s housing stock. The cost of refurbishing existing homes to a high environmental standard is between ten and 25 per cent of that of new-build.<sup>11</sup> Methods include cavity-wall insulation, loft insulation, solid-wall insulation, low-emission double-glazing, condensing boilers and solar water heating. A critical mass for conversion in economic terms is thought to be a minimum of 20 properties. Additional micro-generation and decentralised technologies for greener energy production that could be implemented on a local scale depending on the suitability of the location include biomass heating and small-scale urban wind turbines.

Affordable housing

As well as a demand for more homes, there is pressure for a wider range of housing types. This includes providing more homes suitable for an aging population and a smaller average household, as well as for more housing of all sizes for those on low incomes. Between 2000 and 2007, the average house price across the West of England rose by 113 per cent.<sup>12</sup> Prices have subsequently fallen (as they have nationally) but are still well beyond the pockets of many local people and there is an increasing disparity between earnings and house prices within the city-region.<sup>13</sup>

Local authorities are able to demand that a percentage of new dwellings on development sites are affordable. These might be properties sold at less than market rates to low-income buyers or those offered for a subsidised rent. The authorities in the West of England have generally sought up to 35 per cent. However, the planning agreement only covers urban sites where there are at least 15 dwellings or rural sites of at least ten.<sup>14</sup> In 2007 it was estimated that there was a total backlog of affordable housing of 21,501 dwellings in the city-region, with 8,365 of these being in Bristol.<sup>15</sup> It is thought that there will be an average net need for 4,014 affordable homes per year between 2009 and 2021.<sup>16</sup>

The supplier of affordable housing is typically a housing association. HomesWest is a strategic partnership consisting of Knightstone Housing Association, Somer Housing Group, Sarsen Housing Association and Sovereign Housing that is currently the main means of delivering affordable housing across the four local authorities in the city-region. It has been estimated that double the amount of affordable housing has been secured as a result of the partnership than would otherwise have been the case.<sup>17</sup>

It can confidently be predicted that by 2050 there will be a fundamentally different dynamic in housing supply. It is certain that the situation with regard to affordable housing models will have been radically changed long before this time. This is because the present system has serious faults, not least because it is difficult to move from one social housing category to another should circumstances improve and almost impossible to bridge the gap between these varieties of housing and the regular market. There is a risk that once a social tenant, always a social tenant. In the future, the market should be fluid, accessible to all, with each paying according to means and occupants free to move as if they were 100 per cent home owners (as is already the case in Sweden, for example, where it is the household that is subsidised, and not the home).



## ‘Transport for Greater Bristol’

If the West of England is to promote itself as a competitive city-region, it will need to address the long-standing transport problems highlighted in the previous section and develop a strategic transport network worthy of its aspirations. The 2050 vision needs to address the dual challenge of getting people out of their cars and onto public transport, as well as improving connectivity for those road vehicles that remain.

The number of private car owners in the West of England increased after World War Two to unprecedented levels. A road system that still contained at its heart the tangled layout of medieval city streets and routes intended for horse-drawn traffic was unable to cope with the volume of users. Despite various initiatives, transport and congestion have continued to be a problem for the city-region. Between 1994 and 2004, the volume of traffic on roads in the West of England grew by 21 per cent against a national increase of 16 per cent.<sup>18</sup> Although traffic volume in inner Bristol generally declined in this period, congestion levels remained high, in part because of the lack of adequate east-west routes that bypassed the city centre.<sup>19</sup>

In 2007 it was estimated that at least £350 million was lost to the West of England’s economy each year as a result of time spent in traffic jams, a figure which is expected to rise to almost £600 million by 2016.<sup>20</sup> Income loss is calculated on the basis of delays in moving freight and commercial goods and people being unable to get to spend money at retail and leisure activities, as well as being unable to do their jobs. Time wasted in traffic also cuts into the time that could be far better spent with family and friends.

Although it is most apparent in central Bristol, the North Fringe and Bath, and likely to be an increasing problem in the commuter towns of Weston-super-Mare and Portishead, there are concerns about air quality, travel

delays and other issues associated with congestion across the city-region.<sup>21</sup> Key congestion points include:

- Crossing the M5 at Junction 21 (A370), the main link to the motorway from Weston-super-Mare.
- The M32 into and out of Bristol.
- The A4 between Bristol and Bath.
- The Inner Ring Road east of Bristol city centre.
- The A38 north and south of Bristol, which acts as an overspill from the M5, particularly in the summer.<sup>22</sup>

The heavy congestion on the city-region’s motorways is partly attributed to:

- The relatively short distances between junctions.
- The complicated manoeuvres required at junctions.
- High volumes of commuter and HGV traffic.
- A higher average accident rate than most motorways.
- Half the traffic during peak times having both its origin and destination in the city-region, with drivers making a short on-off movement to avoid bottlenecks on the A-road network.<sup>23</sup>

Local traffic congestion on the two motorways undermines their critically important role in providing access to the South East, South West and South Wales.

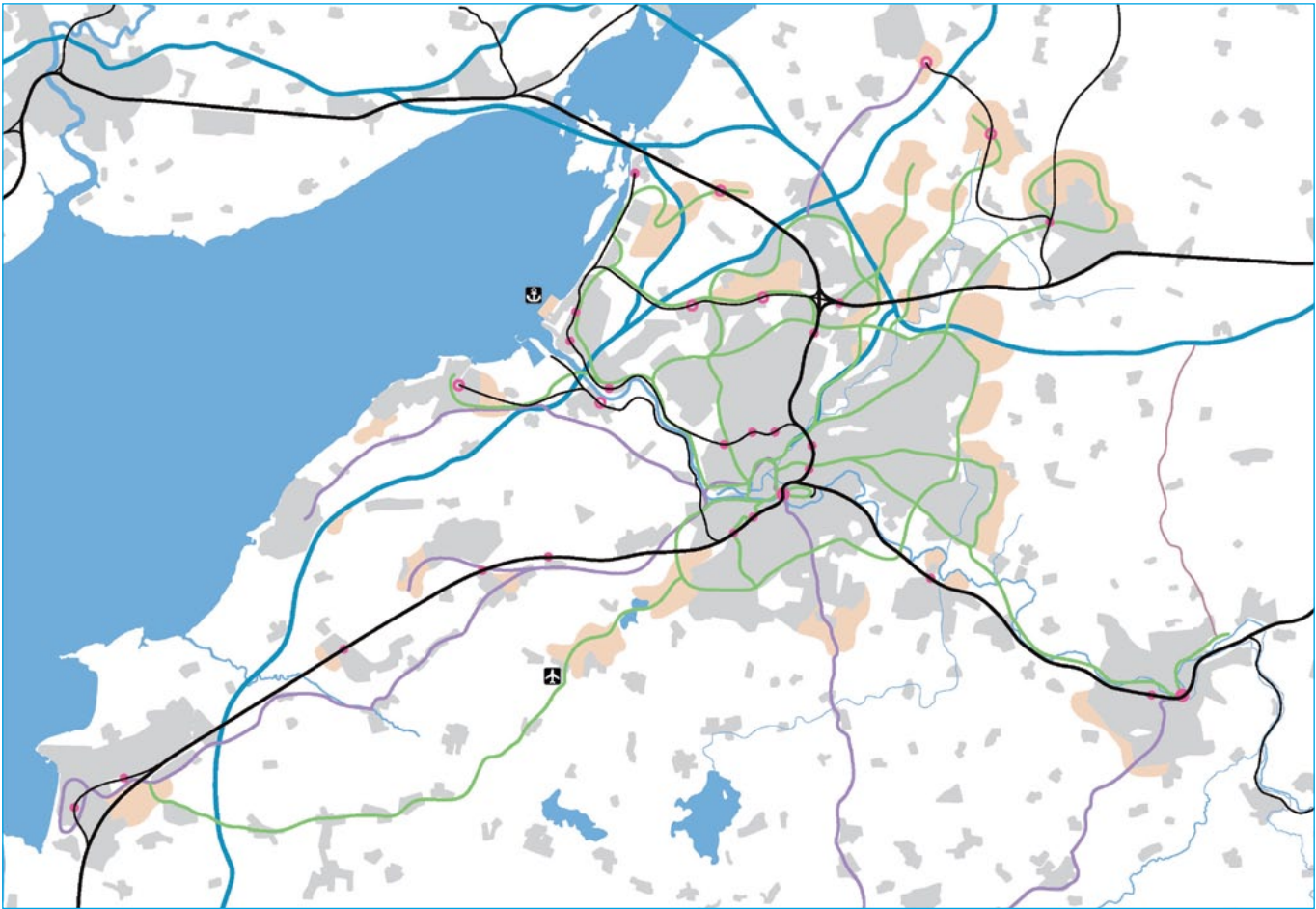
A survey carried out for the Joint Local Transport Plan 3 showed that around 73 per cent of respondents would be willing to use buses as an alternative to the car if

improvements were made to the services, including value for money, vehicle quality and customer service.<sup>24</sup> Reasons given for the relatively low uptake of rail travel as an alternative include:

- A shortage of rolling railway stock, which has led to overcrowding on some train routes and passengers being left stranded at stations.
- Many local trains terminating at Bristol Temple Meads, inconveniencing commuters who have to wait for connections to destinations beyond or across the city.
- Persistent late-running and unreliability of some services.
- The distance of some stations from the local centres of demand.
- Inadequate parking spaces and other facilities at some stations.
- Poor connections to the local bus network.

By 2050 the West of England should have established a new delivery model that, for the purposes of this book, and inspired by Transport for London, we have called ‘Transport for Greater Bristol’ (TfGB). To date, the UK has generally continued to adhere to the concept that public transport should be privately supplied and profitable. Looking at successful city-regions worldwide, it becomes apparent that it is preferable to regard public transport as a utility – something necessary to make the city and region work in the public interest – and subsidy from taxpayers should be considered inevitable, normal and acceptable.

The Basic Framework Plan showing the proposed Rapid Transport (green), additional key bus routes (purple) and areas of redevelopment (beige) (Alec French Architects).





Attempts to create a joined-up network of timetables and services using a mixture of existing bus and rail routes operated by different private companies are likely to fail. There will be a serious risk that services will not reach those most in need at convenient times, if at all, or make logical connections to centres of activity. This already leads to an over-dependency on the car, with those without access to private transport being socially excluded. A much more radical and re-energised approach is needed.

The TfGB would partly take its lead from Integrated Transport Authorities (ITA), which are made up of elected representatives from councils in the designated area who negotiate an annual transport levy that is applied to the council tax. There have been several attempts to initiate an ITA process in the West of England. These failed to get agreement from the four local authorities at the time, but we are confident that there is now greater recognition of the mutual benefit of working together on this issue and that this programme can be successfully revised and delivered. However, taking the longer view, we would go further than the standard ITA model by also delivering the quality of mobility the West of England deserves: one that is fast, reliable, fuel-efficient, well-organised, clean, comfortable, safe, cheap to use and easy to understand.

The TfGB would therefore be a valuable planning and co-ordination body (like an ITA) but, more importantly, it would also be the owner of the services that were operated in the city-region. It is not credible that a growing area of the scale of the West of England should be expected to function on limited, privately owned and operated bus and rail services. The TfGB would be responsible for providing the incentive for getting more drivers out of their private cars, thereby cutting many of the journeys which currently bring congestion to the city-region and all the associated problems this causes.

A network of sleek and efficient mass-transit routes could be introduced of the quality of Nottingham or

Manchester and most European continental cities of comparable size.<sup>25</sup> Tram schemes have been suggested previously, of which the Supertram proposal was the most recent. The urgency of the need to reduce car dependency gives us the incentive to try again. The key routes in operation by 2050 need to be chosen strategically across the city-region as a whole and to connect people sensibly to major centres of attraction. They might include services between Weston-super-Mare, the airport and Bristol city centre, between Portishead and Bristol Temple Meads, between Temple Meads and Bath, and from the North Fringe to the South.

By 2050 TfGB will be running an extensive Rapid Transit system that uses a variety of modern vehicles that are kept segregated from other traffic to ensure uninterrupted flow. There would be a maximum of a 20-minute wait between pick-ups for at least 18 hours a day and stops would be located within a ten-minute walk of the majority of the population. There would be high-quality, highly-accessible stations and interchanges, well-presented information points in various mediums and through-ticketing. As part of this network, better use would be made of the existing rail links to Portishead, Avonmouth and Thornbury, which are currently only used for freight.<sup>26</sup>

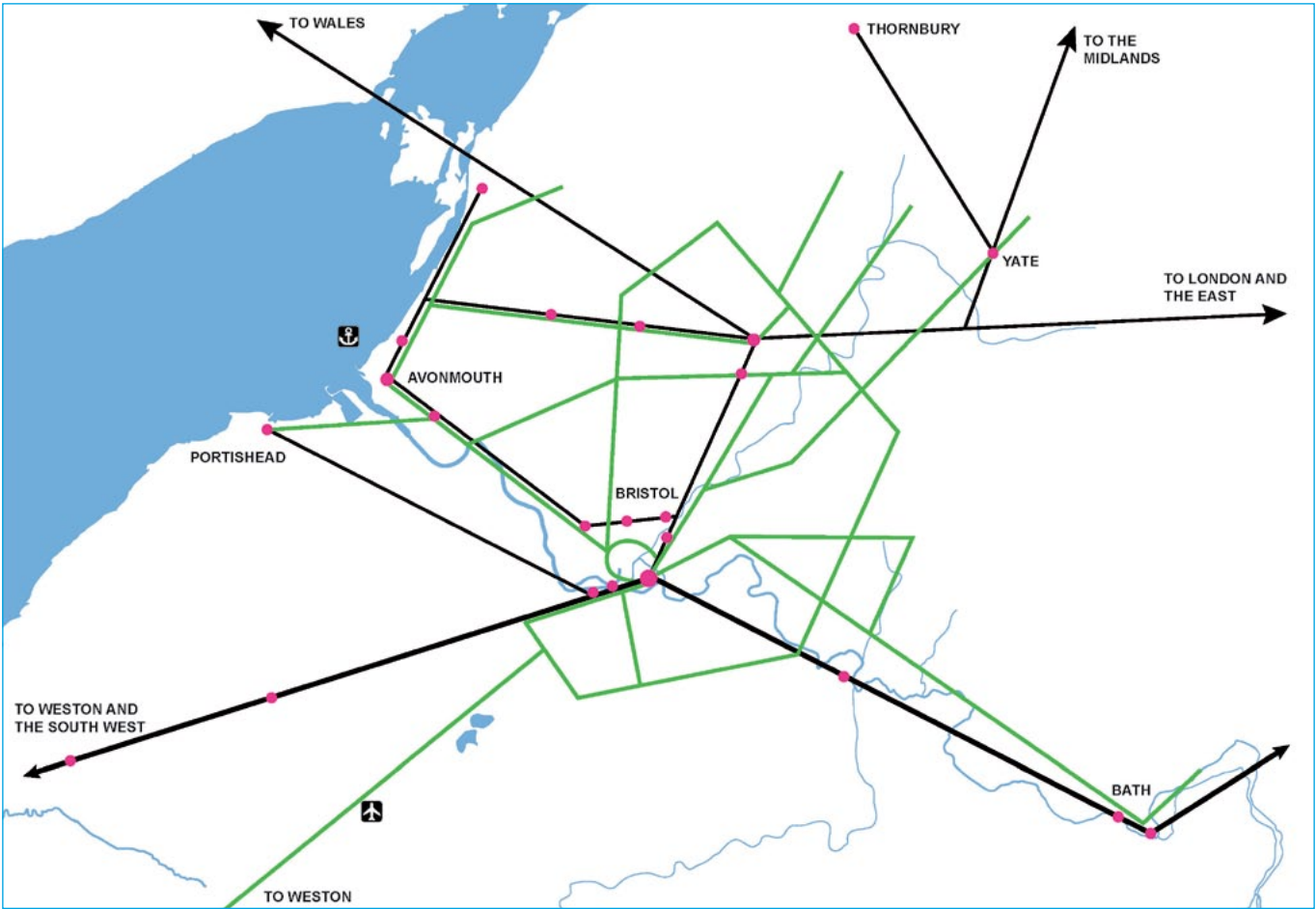
Lille in France provides a convincing example of how an innovative, integrated urban transport system can enhance a city. Improvements to the system have included:

- A new metro with two lines and 36 stations, which has trains running every 72 seconds at peak periods.
- Modern, high-quality Italian trams introduced on routes which run along main roads.
- Buses running on colour-coded loops that connect with other forms of public transport.
- Transferrable tickets valid across all parts of the local network.
- Clearly understood signs and maps, making it easy to change from one system to another.

The metro, tram and bus systems also serve the international and local railway stations. Through these improvements, public transport usage in Lille increased by 77 per cent.<sup>27</sup>

Raising parking charges at destinations and shutting some motorway access ramps during peaks hours could also contribute to the modal shift away from the private car in the city-region, while a new and improved Car Club would encourage a reduction in individual car ownership. With fewer cars, existing roads, including the motorways, could either be converted for dual use, with priority lanes for Rapid Transit vehicles, or completely taken over by public transport. The cars that do remain in use must be energy-efficient models, mostly electric vehicles.

Diagram showing the key Rapid Transport and rail links in the West of England by 2050 (Alec French Architects).



The little extra physical effort required in using public as opposed to private transport will bring considerable health benefits to travellers, contributing towards targets to reduce obesity and heart disease. In addition, the development of more safe, well-signposted and attractive walking and cycling paths that take direct routes between key destinations will get more people out of vehicles altogether for local journeys, thereby building on the work of Sustrans and other initiatives.

Looking at transport outside the city-region, there is already strong road-freight movement along the so-called Estuary motorways of the Atlantic Arc, including the axis upon which the West of England lies and which stretches towards Birmingham, Glasgow and Edinburgh. The city-region could be even better placed if the European Union's proposed development of enhanced trade and movement corridors built onto the existing links of the



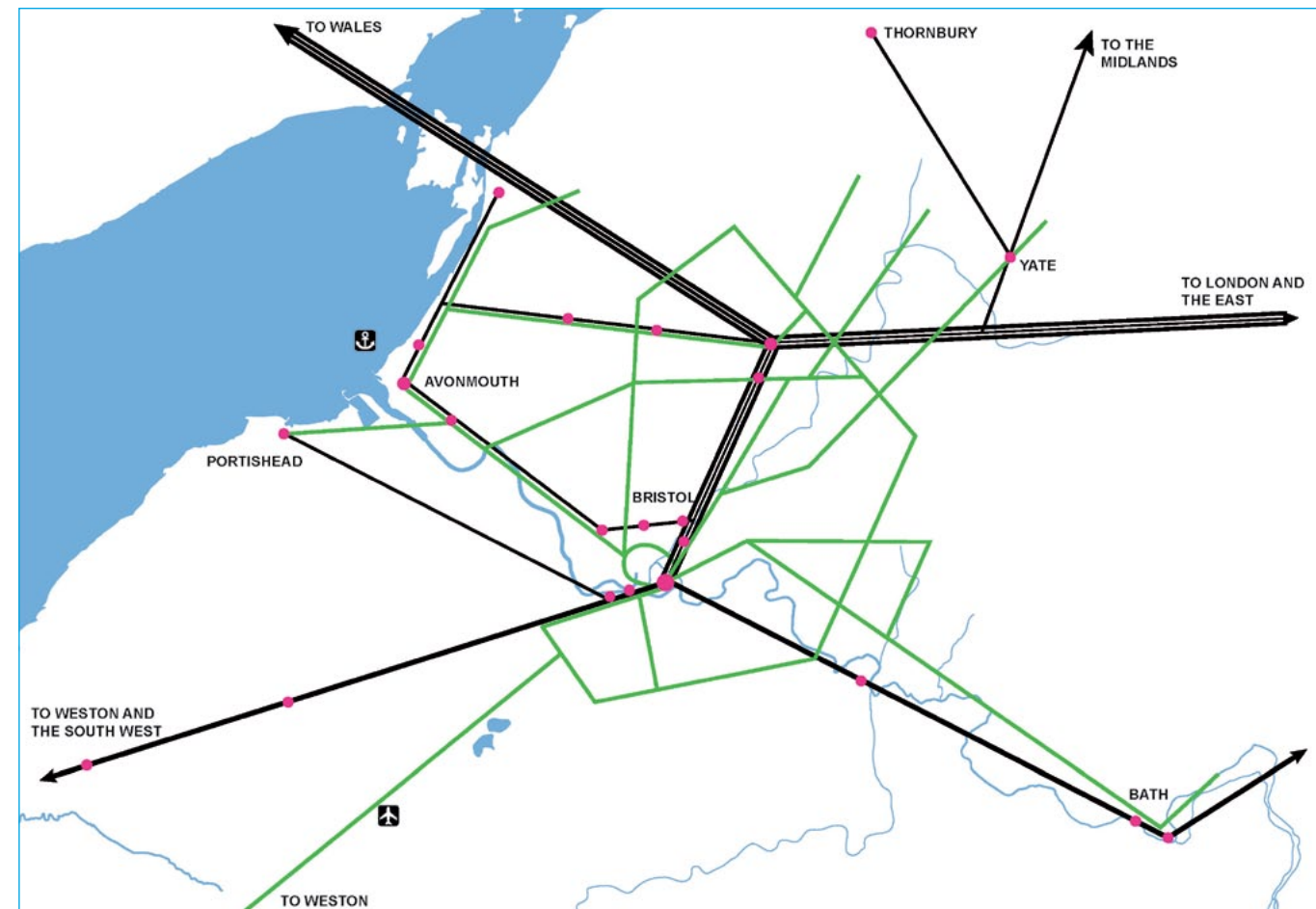


Diagram as above with the HS3 route added (Alec French Architects).

Arc ever come to fruition (they were first published in an European Spatial Planning Observation Network report in 2004).<sup>28</sup> These would include corridors improving connections from the West of England by road and/or rail to London, Cardiff, Southampton and the Solent, and Birmingham, by ferry to Southern Ireland, and along the maritime trade routes. However, currently the West of England's transport connectivity to the rest of the European Union is weak by both rail and air. We already know that companies are attracted to the West of England by the proximity to London, the scale and quality of the labour supply and the quality of life that can be offered to employees, but if access to Europe were improved there would be potential for attracting even more.

High-speed rail links are widely seen as a means of improving the national rail network and providing a service for commercial and private users on a par with some of our European competitors. In addition to being an environmentally-sustainable solution to the country's transport needs, the expected economic benefits of high-speed rail include greater productivity, more jobs and higher wages.<sup>29</sup> The UK's first High Speed rail line (HS1) runs from St Pancras to the Channel Tunnel and through to continental Europe. This route can only be accessed currently from the West of England by taking an ordinary inter-city to Paddington and then using the underground. HS2 is the proposed new high-speed line from London through Birmingham to Glasgow. The Great Western Partnership is currently working on a proposal for HS3 linking Cardiff to London, with a possible spur down to the South West.



Proposed HS3 on the Second Severn Crossing (Alec French Architects).

The port has recently received planning permission for an extension which would see the construction of a Deep-Sea Container Terminal that would enable it to accommodate future generations of Ultra Large Container Ships, designed to transport 14,000 containers at one time. The airport also has plans for a major development that will enable it to handle an estimated ten million passengers per annum by 2020. It anticipates that a significant part of this increase will come from more people choosing to use their local airport rather than travelling to London. Proposals to balance economic benefits with environmental initiatives were included in the planning application: the airport has committed to maintain CO<sub>2</sub> emissions at or below 2007 levels; 20 per cent of the additional energy required by the proposed development will come from on-site renewable sources;

flight emissions will be capped at 2005 levels from 2012; and public transport services will also be extended.

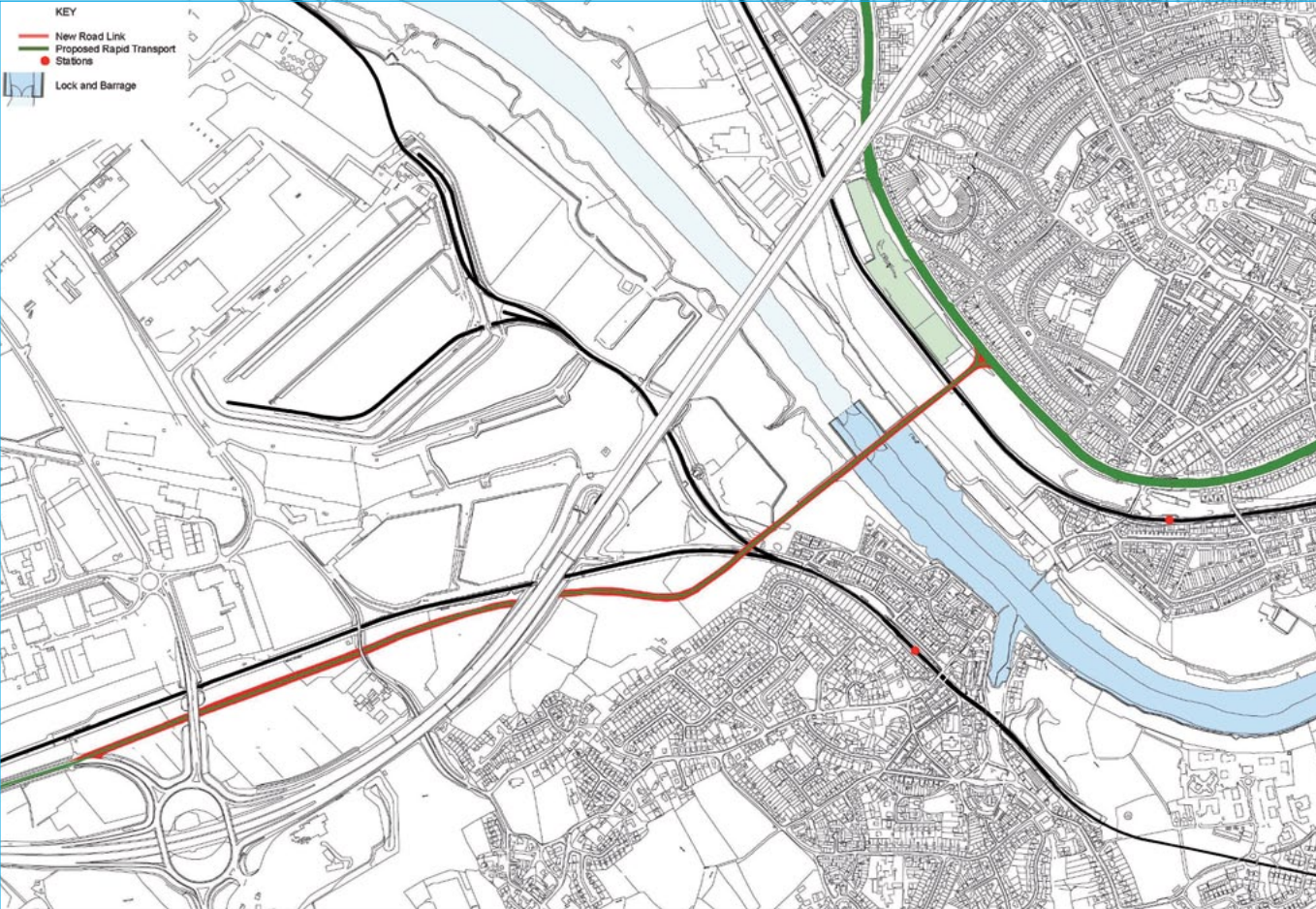
The HS3, port development and airport expansion are in keeping with the 2050 vision and will enhance the city-region's international connectivity. They stand alongside other forms of international connection which will continue to be supported, including various twinning or friendship agreements that have been established by parts of the city-region; the work of the city-region's tourist agencies; the strong international connections of individual companies based here – for example the multi-national Airbus consortium which links the facilities in Filton to its Toulouse headquarters; and international partnership initiatives in a range of fields – for example, film-makers drawn to Bristol by the biennial Wildscreen Festival, or EU-funded programmes involving the city-region's universities.



# The Avon Gorge and Cumberland Basin

A building of a barrage across the Avon can provide three important benefits:

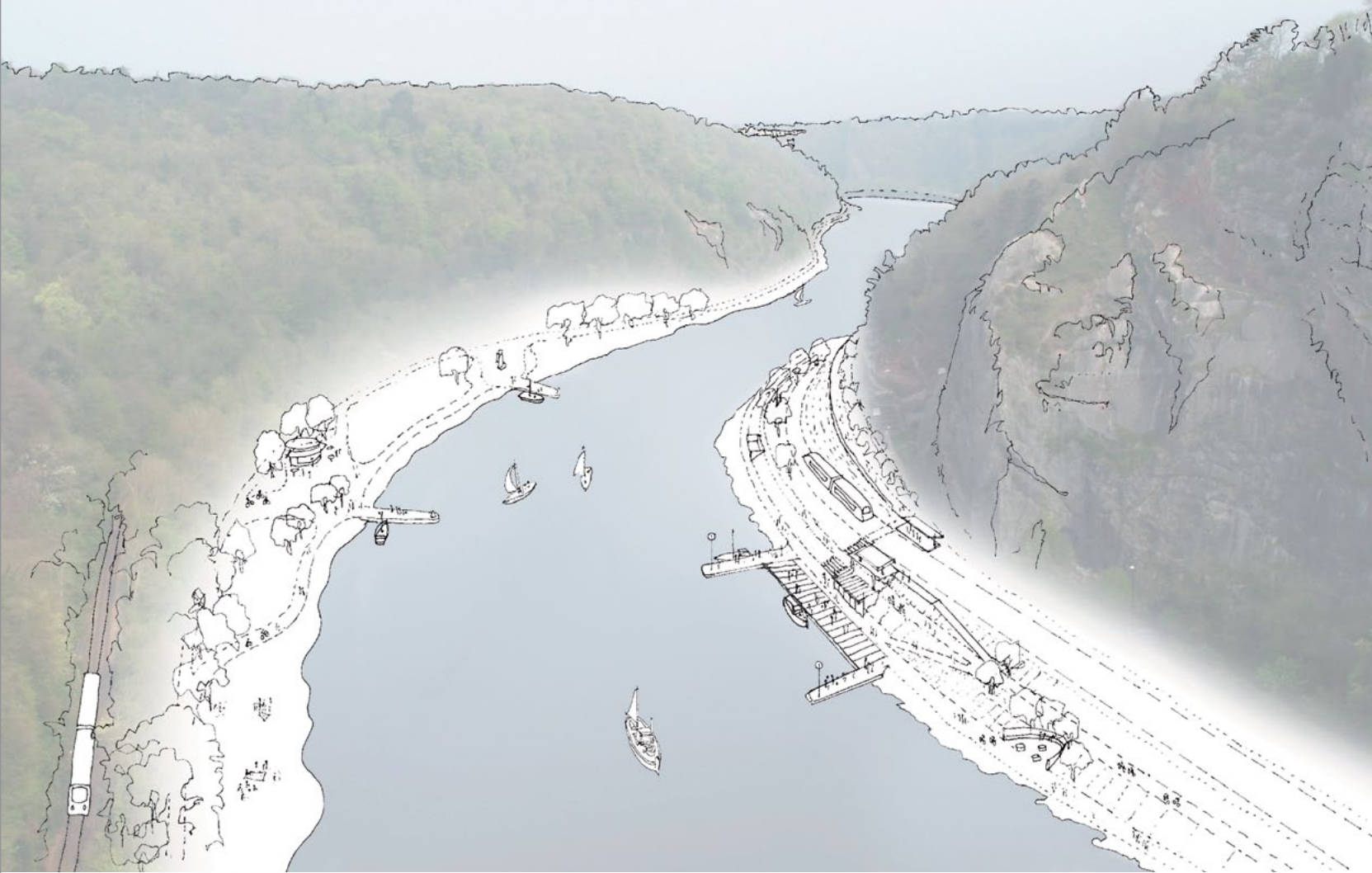
- It creates a linear water park through the Gorge and through the Bristol urban area as far as Netham.
- It provides a second local crossing, relieving the Avonmouth Bridge and providing a direct link for rapid transport vehicles from Portishead and Clevedon into the city centre or across to the North and East of the city.
- It protects central Bristol from anticipated major flooding.



Above: The proposed Avon barrage and lock gates (Alec French Architects). A new road link is shown avoiding the junction of the M5, running parallel to the Portishead line and then rising to cross it. At that level it is above the line of the barrage, crosses the Severn Beach line and links to The Portway. A lock provides for the largest vessels that can navigate the Avon. A lifting section of the road bridge would only be required for the tall ships.

Opposite: View from the Clifton Suspension Bridge of the non-tidal water in the Avon Gorge created by the proposed barrage (Alec French Architects).

The barrage would incorporate a new lock and dam which would hold back a section of the Avon to create a large body of non-tidal water that would run through the Gorge down to the docks in the city centre. Presently, the river’s unusually high tidal range reduces the magnificent Gorge to a valley of mud for much of the day. By extending the non-tidal expanse beyond the existing



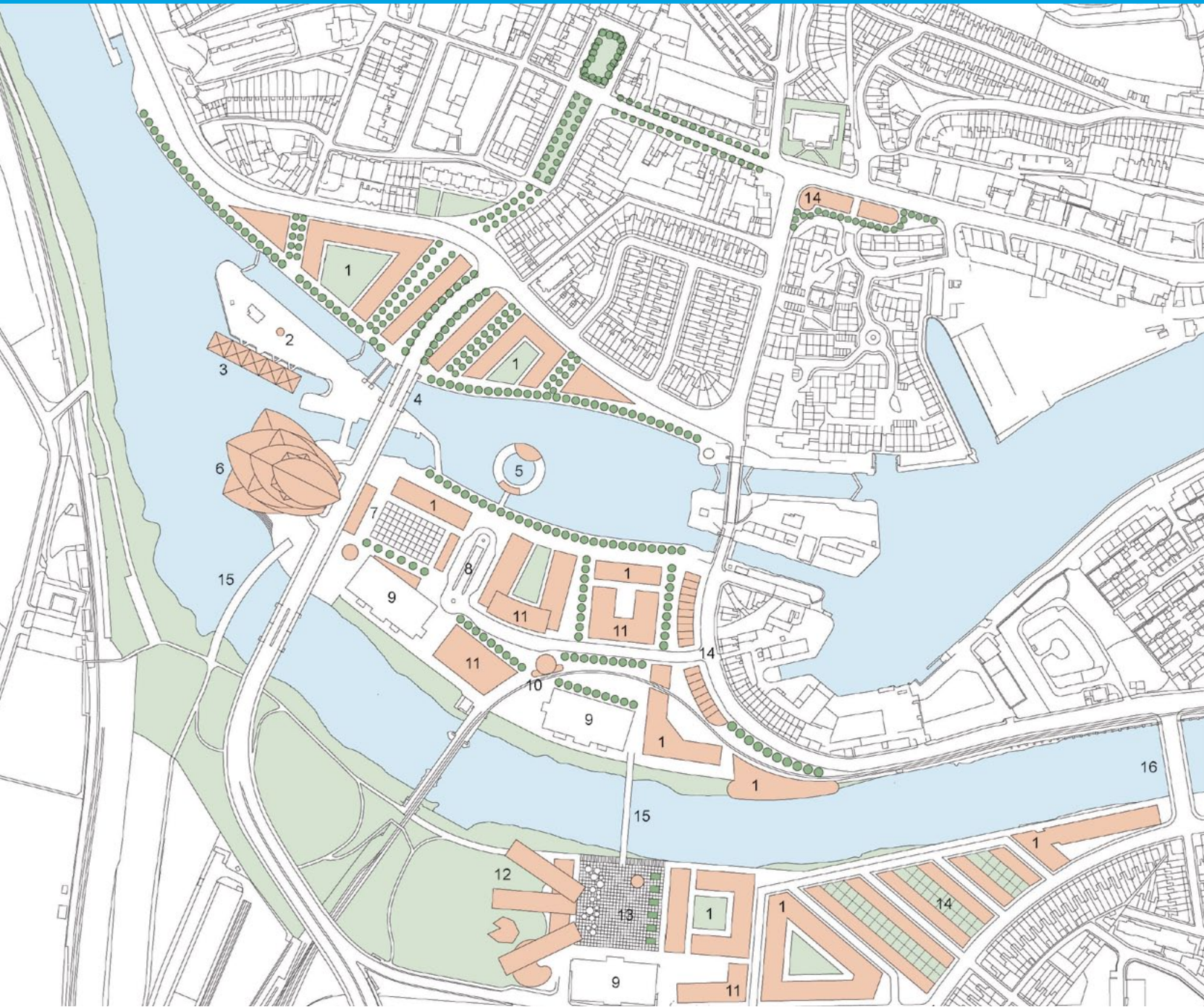
Floating Harbour, more water would be available for recreational boating, fishing and nature studies and as an attractive backdrop for waterside walks. It could also become an enhanced transport corridor for water-buses and other vessels.

In common with most industrialised ports, the water’s edge within Bristol city-centre was increasingly placed out of bounds to the public for safety and security reasons. With the closure of the docks, this has been partly rectified in recent years and access has been enhanced further with the restoration and development of continuous waterside foot and cycle paths, self-guided walking tours and various trips available by boat. More

can still be done. The water is a major environmental, cultural and economic asset for the city-region and has the potential to make an even greater contribution to the quality of life that is enjoyed here.

Consideration could be given to removing heavy traffic from The Portway to make a more attractive entranceway to the city. Cars could be banned completely or during set periods and the road space could instead be used to establish a new safe route for cycling and walking, as well as for a new Rapid Transit public transport system, restoring some of the original tranquillity to the Gorge so its unique pleasures could be properly appreciated.





**Key**

- |                            |                              |
|----------------------------|------------------------------|
| 1. Apartments              | 9. Bonded Warehouse          |
| 2. Viewing Tower           | 10. Rapid Transport Terminal |
| 3. Restaurant Pavilions    | 11. Offices                  |
| 4. New Lifting Bridge      | 12. College Buildings        |
| 5. Floating Swimming Pool  | 13. New Square               |
| 6. Major Cultural Building | 14. Family Houses            |
| 7. Public Entrance         | 15. New Footbridge           |
| 8. Place of Arrival        | 16. New Road Bridge          |

Thought should also be given to enhancing the Cumberland Basin. Over the period of the 2050 vision, the cost of maintaining the existing high-level bridge and its associated approach roads is expected to be exorbitant. Replacing it with a low-level crossing incorporating a lift-bridge and using much of the land on which it stands for new housing and offices is financially viable. All but local traffic could be removed from a restored Dowry Square so this eighteenth-century gem could be better appreciated, both sides of the Basin could accommodate new housing (with mixed use envisaged to the south) and existing activities along Coronation

Road could eventually be relocated and more family housing could be developed there. A new major cultural building could take advantage of this key location in the city and the quality and continuity of the adjacent green spaces enhanced. The indicative plan reproduced here of an area of approximately 11.5 hectares shows 1,100 dwellings, 35,500 square metres of employment space of various types, retail and restaurant areas, new educational facilities (including a new skills academy) and a proposed new cultural building. The historic bonded warehouses have been incorporated into the plan, and those currently in use for storage reconfigured for new uses.

Opposite: Cumberland Basin indicative master plan (Alec French Architects).

Overleaf: Perspective view of Cumberland Basin proposal (Alec French Architects).

Below: View towards a reconfigured Cumberland Basin from Clifton Suspension Bridge along the non-tidal water of the Gorge (Alec French Architects).









# The City-Regional Park

The physical environment of the West of England – its countryside, its estuarial shore and its towns and cities – has qualities which are often cited as the key motivation for people moving to and remaining in the city-region. Its essential integrity needs to be carefully nurtured, maintained and improved. This might best be achieved by planning and managing holistically. The West of England could become by 2050 the first city-region to organise town and country as one connected space, breaking the mould of conventional thinking about the urban and the rural as being separate and almost unrelated entities.

If the qualities of the West of England are considered to be of an appropriate standard, National Park Authority status could in theory be sought from the government. It would be the UK’s first City-Regional National Park. Such a move would almost certainly be controversial. However, while the loss of some planning powers to the National Park Authority might upset some, it would be for the sake of creating a body that would make decisions for the benefit of the city-region as a whole. Taking responsibility for the strategic direction of a whole city-region goes well beyond the normal powers and responsibilities of a National Park Authority, but the benefits of such a change over the present division along local authority lines far outweigh possible disadvantages and difficulties.

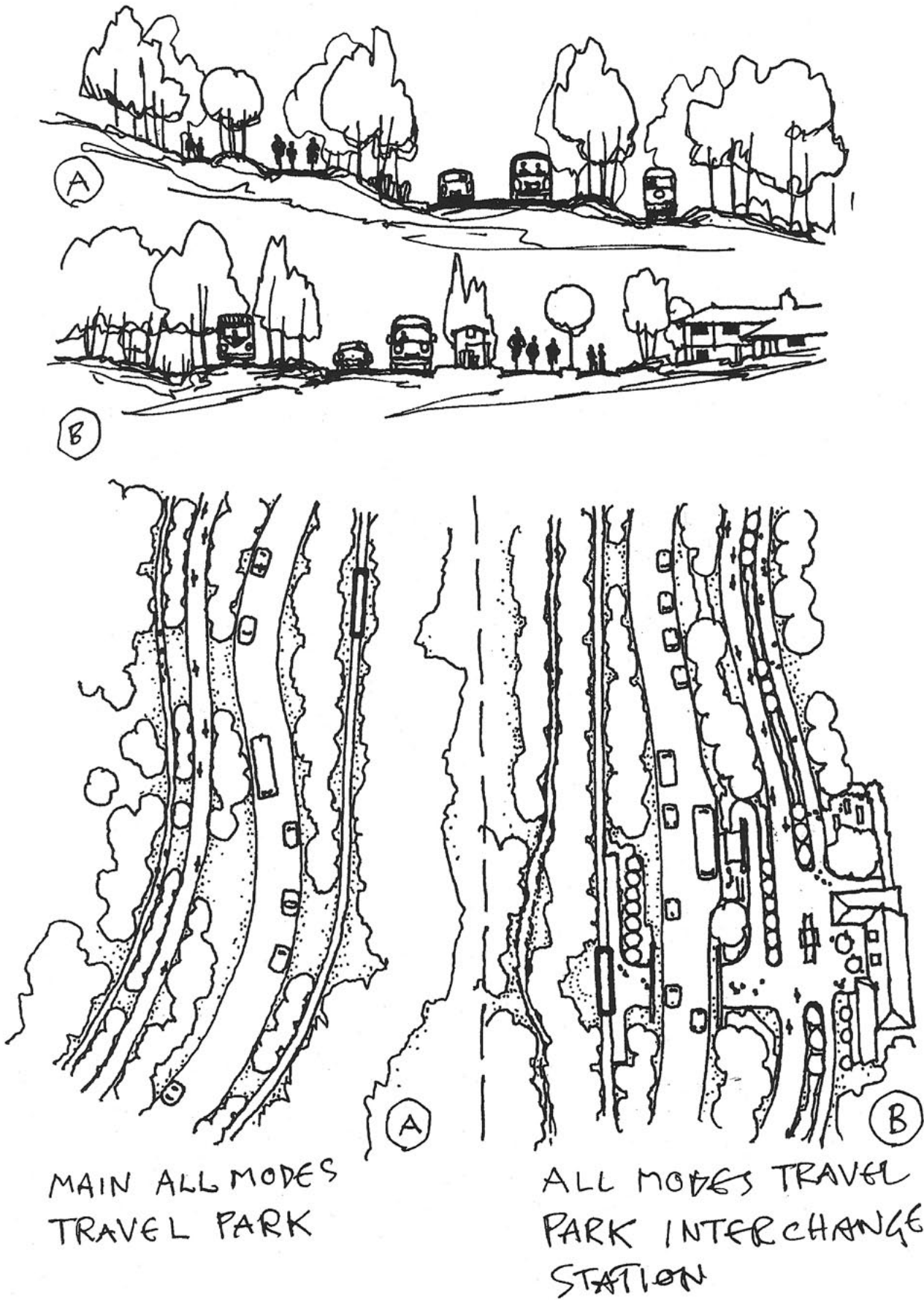
It may be less threatening politically, and perhaps more realistic for 2050, to create a West of England Regional Park. The term Regional Park refers to distinctive and extensive areas where unified strategic management and spatial planning can bring about significant economic, environmental and social benefits. Unlike National Parks, a Regional Park is not a statutory designation. A Regional Park is a mechanism for realising the opportunities and capitalising on the assets within an area. The Emscher Regional Park in North Rhine-Westphalia, Germany, is perhaps the most relevant model for the West of England.

It has used ecology as the central organising focus for the regeneration of the region’s economy as well as its environment; turned industrial wastelands into a regional network of open space, recreation and cultural resources; and undertaken land reclamation on a regional basis.<sup>30</sup>

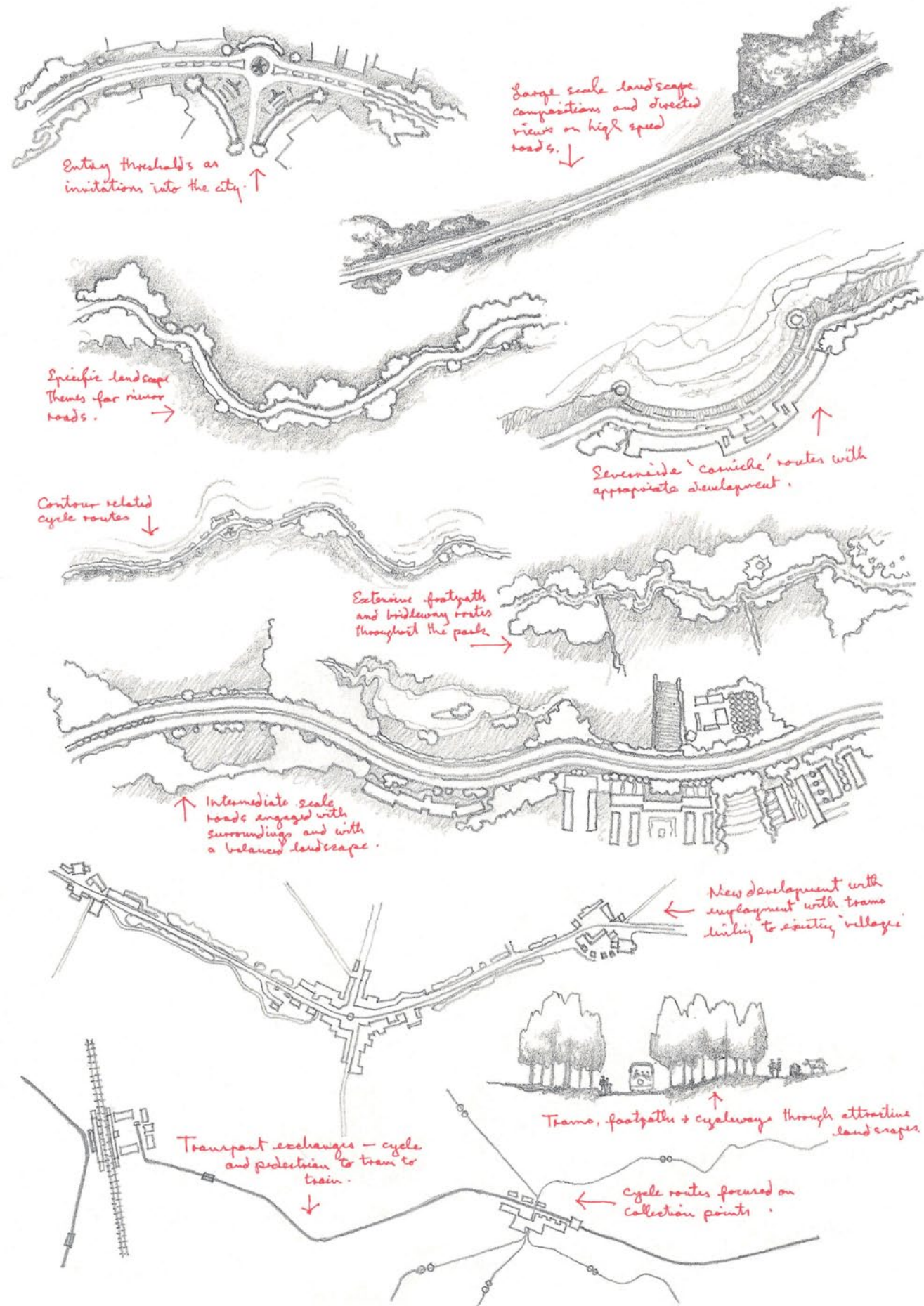
Designation as a Regional Park would stimulate better and more effective guardianship of the West of England’s cities, towns and countryside. Planning, management and infrastructure would consider the city-region’s space as a whole. The urban and rural populations would start to share responsibility for the complete environment, perhaps through a forum that considered governance outside the short-term and territorial parameters that currently exist and was receptive to planned change. Among the many benefits to the city-region of maximising the use of our rural space would be the possibility of reinvigorating the landscape, being more self-sufficient in food production, creating new woodlands and meeting zero-carbon targets more quickly.

Opposite: Sketch showing how thinking of the whole of the West of England as a parkland city-region can affect the design of strategic infrastructure, such as major new roads (David Lock Associates).

Overleaf: Further sketches and working notes showing how designed interventions, informed by an appreciation of the overview, can contribute to the making of a parkland city-region (David Lock Associates).







## The Severn Estuary and Coastal Towns

At present, the public find it difficult to gain entry to large stretches of the shore of the Severn Estuary. Sympathetic design solutions could address this problem, as well as enrich the ecosystem that this unique asset supports.

By 2050 investment in an extensive footpath and cycle network along the shore, with picnic areas and discreet parking facilities provided for visitors, could have increased access for recreation, leisure and education. The environment of the water-margin could be improved by the removal of urban debris and by innovative installations that create more varied depths of water and more varieties of vegetation to encourage more wildlife. The replacement of the unattractive sea defences with more appropriate forms and the screening of the worst of the industrial intrusions could, at the same time, improve the inland view.

The main objectives of what might be termed the West of England Estuary Waterfront would be:

- To create the prime bird-watching centre in Britain, centred on wading and feeding flocks on the mudflats, sand and gravel spits in the channel.
- To interpret the designation of the area as a Ramsar site and its outstanding scientific value.
- To highlight the relationships between the tide cycle, the mud, sand and gravel exposed at low tide and the influence of powerful currents and tidal flows on the composition and form of these deposits, and to interpret the life forms these support on which the higher aquatic species and the vast bird flocks thrive.
- To provide the opportunity for close public observation of bird behaviour and increased awareness of the tidal energies and moods of the estuary.
- To inform the public of the fragility and complexity of the Bristol Channel ecosystem.

- To interpret the historic and evolving relationship of the city-region with the estuary.

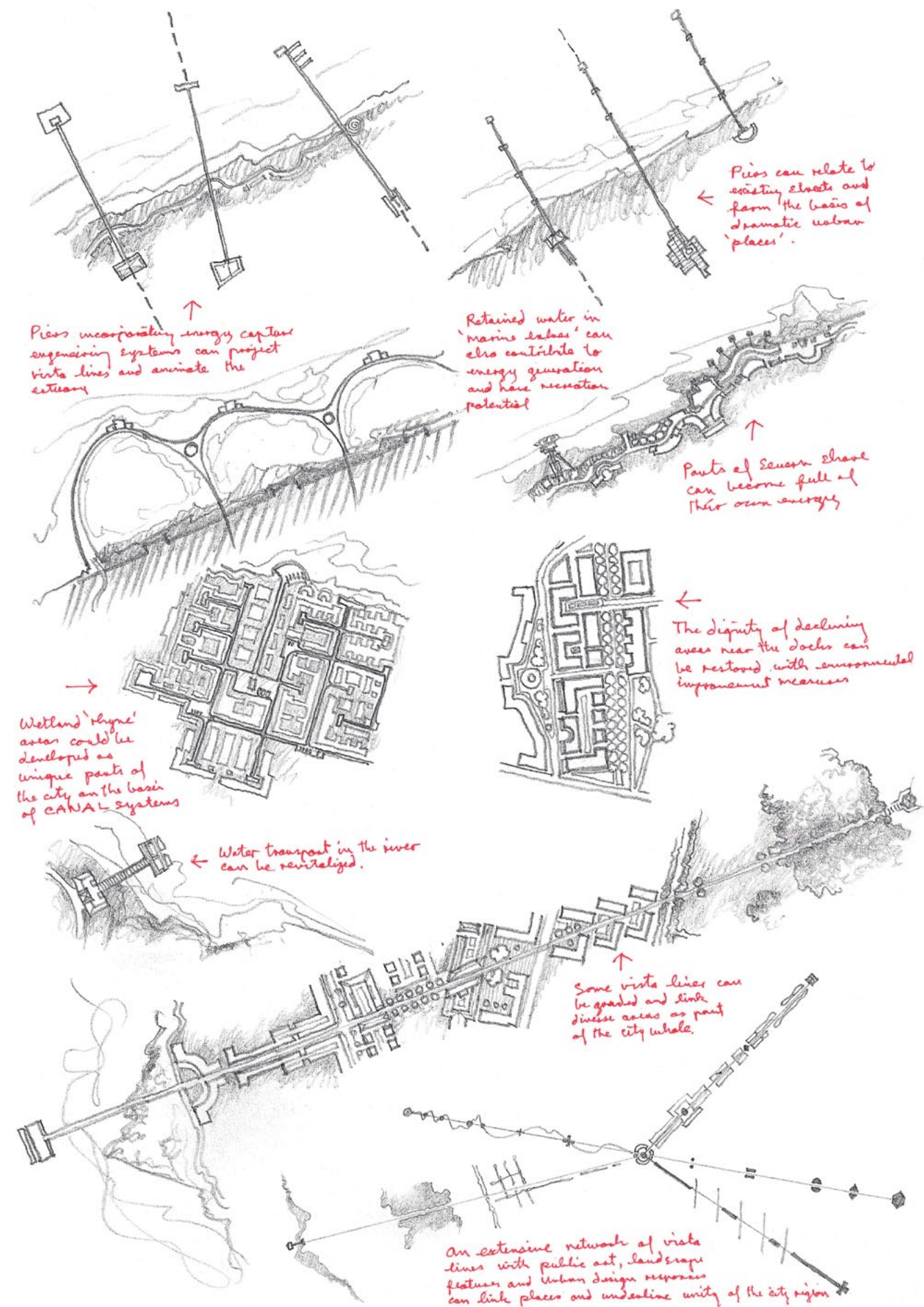
Its principles would be:

- To enable significant visitor numbers to have close involvement with the channel and its wildlife.
- To provide means for this to take place without disturbance to bird populations, feeding patterns and movement.
- To make bird, habitat and wildlife observation a key tourist attraction for the West of England.
- To enhance the experience of bird watching through creating dramatic relationships with the river, its movements and its power.

Its main components would be:

- Enclosed access systems which over-sail the birds' feeding areas, enabling large numbers of visitors to observe the birds without disturbing them.
- High-quality electronic observation of bird and aquatic life, with large-screen presentations at interpretation/education centres.
- Modification of sections of the waterfront to provide promenades with screened bird-watching stations.
- Development of shoreline scrapes and retained bodies of water to lengthen birds' feeding periods and increase bird presence nearer to high tide.





Providing managed access and embedding the natural wealth of the estuary more fully in the life of the city-region might alarm those who believe nature can only be conserved by segregating it from human activity. However, offering greater opportunity to engage with the fragilities and splendours of the natural world will increase understanding and a desire to protect it.

With the new expanse of non-tidal water in the Avon Gorge (described above) and a more proactive approach to the appreciation of the natural environment of the Severn Estuary, by 2050 the city-region could have a significantly enhanced 'blue' element to benefit residents and visitors.

Opposite: Working sketches taking forward some ideas of linking the estuary shore with the conurbation more effectively (David Lock Associates).

Overleaf (left): Sketches of a variety of forms of excursion into the wildlife zone that are possible using existing mudflats and forms (David Lock Associates).

Overleaf (right): Sketches of possible tethered floating hides that would have minimal impact on the ecology of the mudflats, but provide maximum educational and recreational value (David Lock Associates).

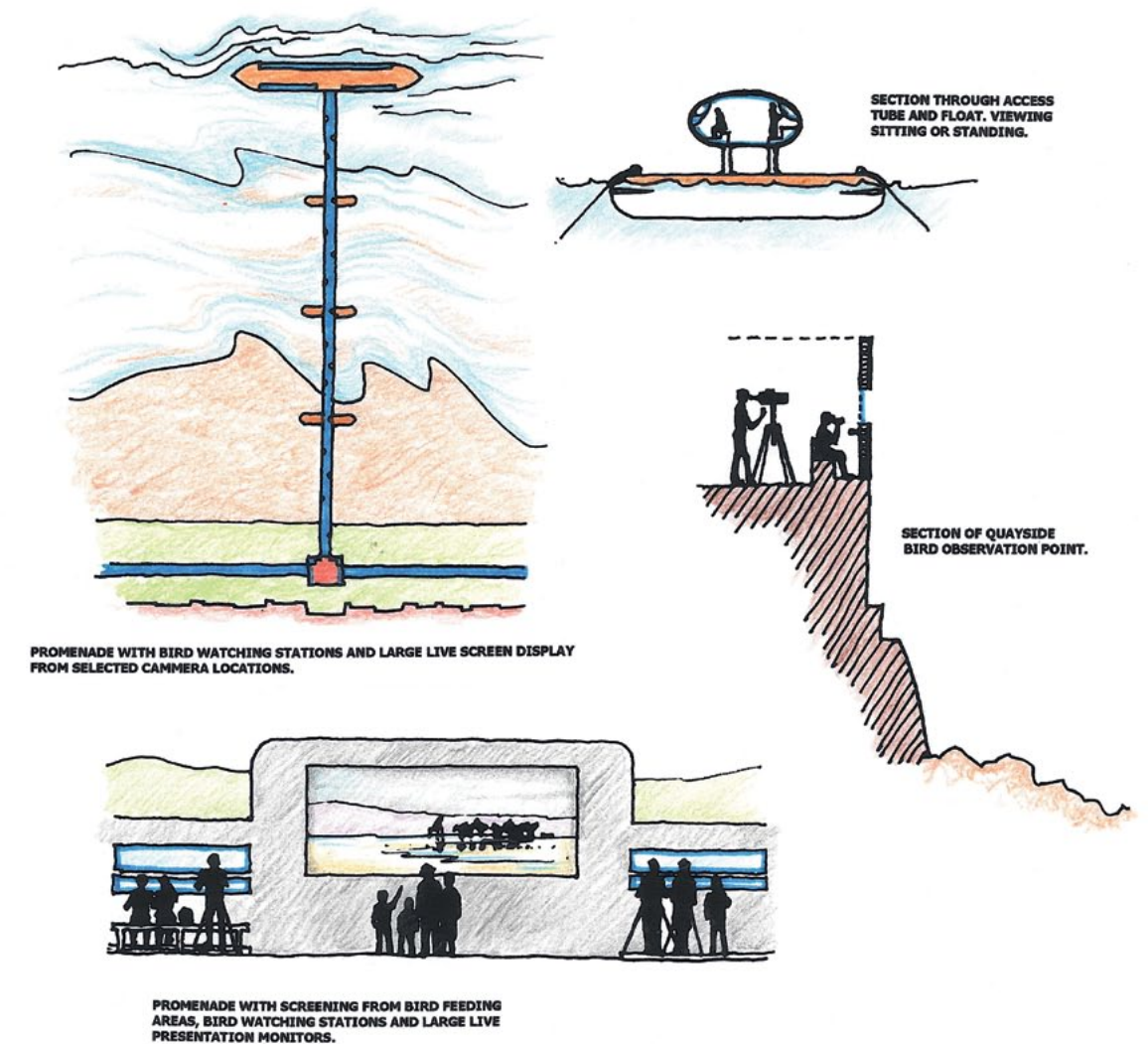
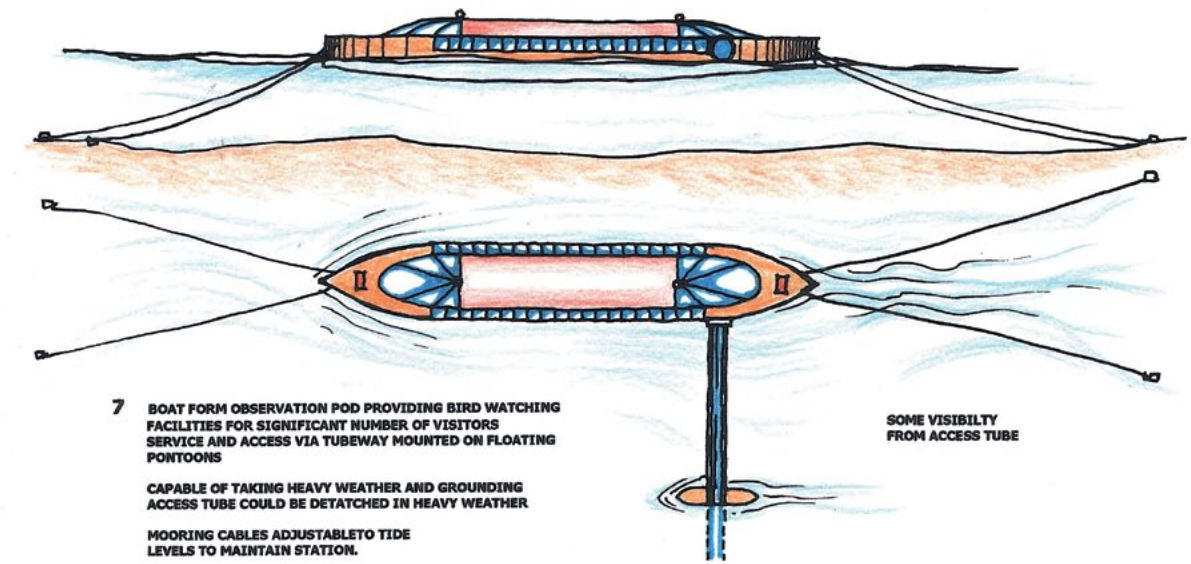
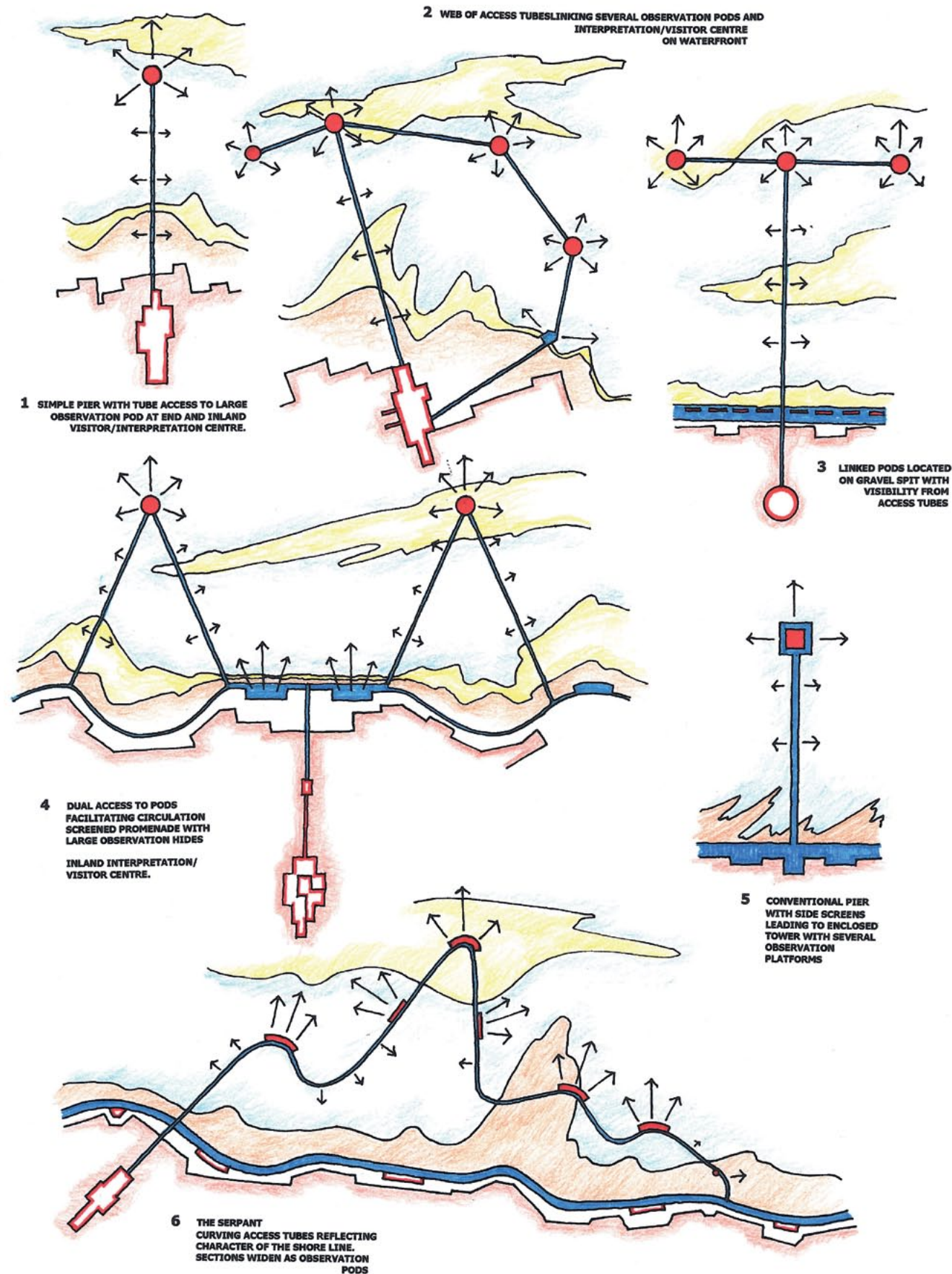
The enhancement of the estuary shore would also be of benefit to the coastal resorts, supporting them in their efforts to raise the quality of their draw as part of a West of England Riviera. Nationally, coastal towns share common problems, which include:<sup>31</sup>

- Physical and social isolation. This is potentially less of a problem for Weston-super-Mare and Clevedon, which function as dormitory towns for Bristol and are close to the motorway network (although the congestion problem, referred to elsewhere, means they feel further away than they are). Weston-super-Mare is on the national rail network but the Clevedon branch line was lost with the Beeching cuts.
- A high proportion of older people, putting pressure on health and other services. In 2006 the average percentage of the population in principal English seaside towns classified as elderly was 24 per cent, compared with an overall national average of 19 per cent. For Weston-super-Mare, the figure was 23 per cent.<sup>32</sup>
- Higher levels of outward migration among young people.
- Low-wage, low-skill economies and seasonal employment.
- Frequent dependency on a single industry. This is potentially less of a problem for Weston-super-Mare, whose biggest employment sector is public administration (34 per cent in 2006), followed by distribution/hotel/restaurants (32 per cent) and banking (16 per cent), although the recent government cuts to the public sector alongside the economic recession puts such jobs at risk.<sup>33</sup>
- High incidence of poor housing conditions and a high proportion of private rented homes.

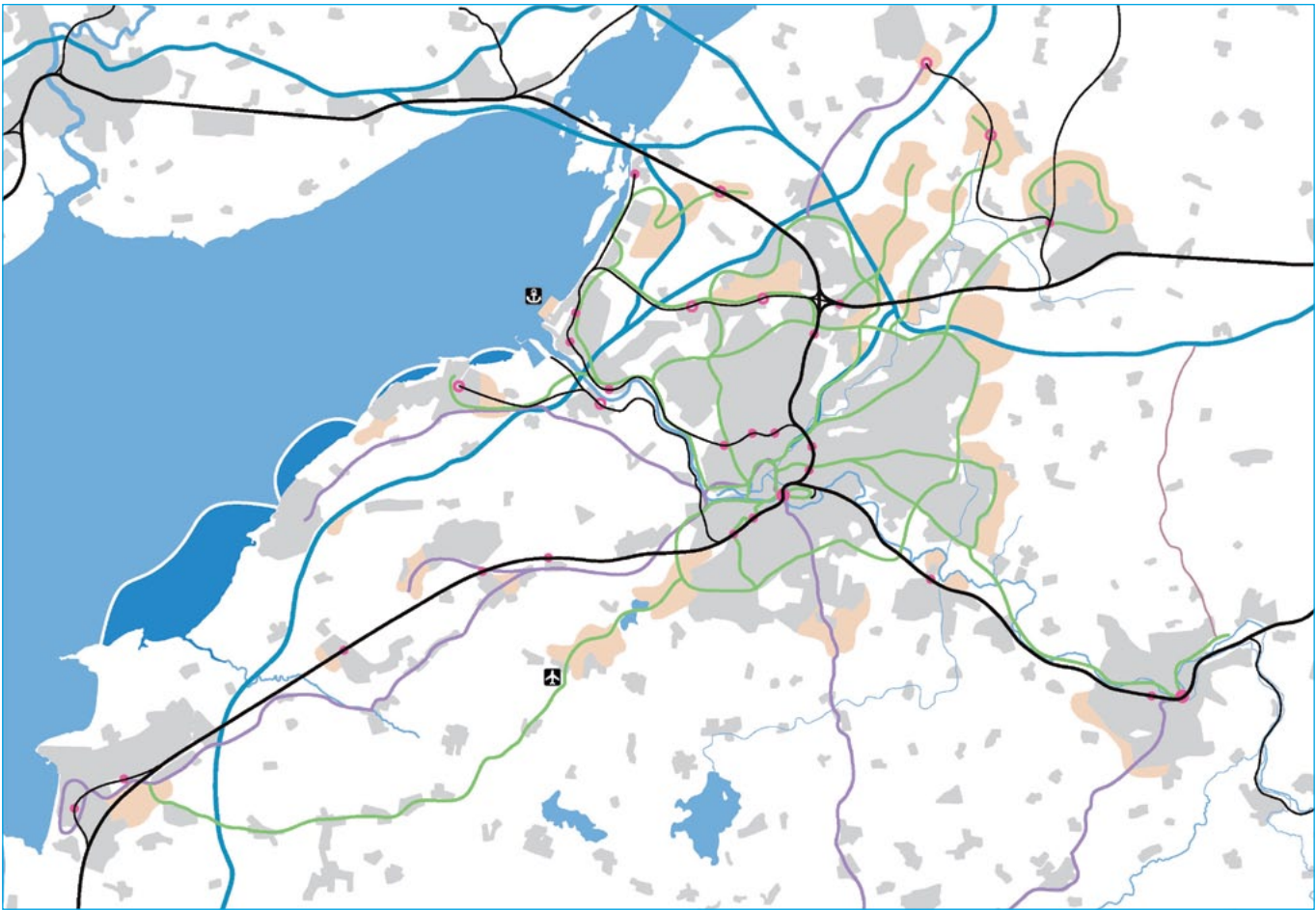
These issues need to be addressed within the 2050 vision.



DIAGRAMS OF POSSIBLE ENCLOSED BIRD OBSERVATION PIER SYSTEMS OVERLOOKING SEVERN ESTUARY & SITES OF SPECIAL SCIENTIFIC INTEREST BRISTOL WATERFRONT.







- Rapid Transport
- Additional Key Bus Routes
- Areas of Potential Development
- Lagoons

The Basic Framework Plan to which has been added the new lagoons of the enhanced estuary (Alec French Architects).

## New Model of Governance

The vision for 2050 has always sought to embrace the whole of the West of England – to look beyond individual local authority political boundaries in order to plan strategically the economic development, physical layout, connectivity and housing that will enable the city-region to meet its needs and fulfil its potential. There is a clear link between municipal authorities and economic success and the UK’s currently informal city-regions have emerged as drivers of regional and national economic growth.<sup>34</sup>

There are notionally two types of governance models that can be adopted at a city-regional level:

- 1. The layer-cake model.** Essentially a model based on the rigorous delegation of administrative powers, and the clear delineation of providing functions and programmes among different levels of government.
- 2. The marble-cake model.** A flexible, functional spread of public responsibilities between government and non-governmental bodies and private stakeholders. This model is often preferred at a city-regional level, where there is a frequent crosscutting of existing administrative borders.<sup>35</sup>

Although the marble-cake model offers a less formal and more generally accepted model of governance, establishing governance in a city-region should be determined principally by local circumstances, rather than imposing a ‘one size fits all’ template, and any model needs to be tailored to suit. However, with this caveat, we are convinced that a change is needed to the present, fragmented system and the marble-cake provides a useful starting point.

In setting out the physical framework of the city-region for the Basic Framework Plan, the emphasis has been on the real geography of the city-region, as distinct from the existing administrative boundaries of the four authorities.

Those boundaries were designed in the 1960s as the best fit, at that time, between present-day functionality and historic precedents. The current administrative arrangements for the city-region do not facilitate strong strategic leadership, as no responsibility is taken for the whole. The best that can be done is to aggregate small-area decisions and try and deal with cross-boundary issues by negotiation. Unwilling participants on some key issues such as major roads or the quantity and location of new homes have, in effect, brought longer-term visioning and planning to a stop.

One way to address this would be to establish an elected mayor and cabinet of senior politicians, all with a degree of real democratic accountability for the city-region as a whole and an understanding of the bigger picture. They would need to be supported by a small cadre of staff focused on strategic matters concerning the overall direction of the city-region in the medium to longer term. Recently published research from the Institute of Government and the Centre for Cities has concluded that a mayoral model of governance has the potential to make local economic policymaking more effective:

A mayor could use both the formal and informal powers attached to the mayoral model to overcome four key governance challenges to economic policymaking; a mayor has the potential to help city governments be decisive on issues of strategic



economic importance, to act as a representative to local business and central government, bring coherence to the actions of the public sector and collaborate with local authorities, business and other players in the wider local economy.<sup>36</sup>

Although the report refers to cities rather than city-regions, for our purposes the obvious parallel that suggests itself is the Mayor of London, whose responsibility is for the whole of Greater London, not for any one of the individual London boroughs. We would campaign for an elected Mayor of the West of England and not one for each of the individual authorities.

It might be that the recent establishment of a Local Enterprise Partnership covering the four unitary authorities could be an effective alternative basis for ambitious co-operation on a scale that has hitherto been lacking. The Local Enterprise Partnerships were designed to replace on a more local scale the economic development activities carried out regionally by the Regional Development Agencies until their closure in 2011. To work at optimum level, the authorities would need to adopt radical new approaches to sharing decisions on, particularly, planning but also on other key issues like education, housing and transport. Their judgements would be based on an understanding of common purpose and mutual advantage.

History suggests that such far-sighted co-operation will be difficult to achieve and so the mayoral model is our preferred option for governance of the city-region. Less ambitious alternatives might be a Leaders’ Board drawn from the existing local authorities, or to follow the pioneering path of the recently established Greater Manchester Combined Authority, which comprises one member from each of the ten local authorities.<sup>37</sup> The point, however, at this stage is not so much the statutory or democratic detail, but that the activity of strategic leadership and decision-making is essential if the city-region is to move forward and the 2050 vision is to be delivered.

Many North American and European city-regions have already realised that in order to be competitive, they need to act at a wider level. Examples include:

- Chicago Metropolis, a non-profit, business-backed civic organisation promoting healthy regional growth.
- The Greater Toronto Area, which provides a regional perspective while the City of Toronto’s single-tier municipal authority retains its role as the main governing and legislative body for the city itself.
- Verband Region Stuttgart, a political organisation with its own directly elected representatives, whose principal aim is to promote economic development in a poly-centric region where people typically live in one town, work in another and spend their leisure time elsewhere.
- Lille Métropole Communauté Urbaine, a poly-centric metropolitan area that includes not only the city of Lille but also the urban conurbations of Lens, Douai and Valenciennes and stretches across the French-Belgian border.<sup>38</sup>

Experience has shown that there are a number of difficulties to be faced by such city-regional bodies, including:

- Local government fragmentation.
- Economic competition between adjacent local authorities.
- The segregation of excluded communities.
- Failure to market the city-region effectively.
- Concerns that the central city is too small to punch its weight in national and global markets.
- Territorial tensions, whereby smaller municipalities are reluctant to be overwhelmed by the larger city.
- National governments reluctant to strengthen the position of already powerful central cities.<sup>39</sup>

However, we still believe that the underlying principle of forming strategic alliances between willing partners around agreed territories/powers and resources in order to increase a city-region’s status should be encouraged. It is that determination to work for the benefit of the city-region as whole that is needed to fulfil the 2050 vision for the West of England.

We have provided a taster of the type of grand schemes and big ideas that need to be our aspiration when master-planning for the next 40 years and beyond: rebalancing North and South Bristol; tackling low educational attainment, lack of opportunity and worklessness as part of our eradication of deprivation; designing urban areas and homes that meet our highest expectations; finding better uses for brownfield sites; transforming our transport system; building a road-carrying barrage across the Avon to improve connectivity and enhance our blue space; managing the city-region holistically as a Regional Park; creating the West of England Estuary Waterfront and Riviera as a resource for residents and visitors; and changing our system of governance. It is well to keep these goals in mind when turning to the fundamentals of how they will be paid for and delivered. We need to challenge ourselves to find the means to match our vision, not match our vision to our available means.



# Taking the vision forward

Much of the cost of changing infrastructure and providing new facilities over the 40-year view taken by the 2050 vision will be covered by routine national and local government spending throughout the period. However, there will be a requirement for early, riskier investment for elements that will need particular far-sightedness.

UK governments, like many in the Western world, tend to direct spending towards areas of need rather than opportunity. This is hardly surprising: places of severe deprivation can be crucibles of civil unrest, as has been identified earlier in the book, but these remedies tend to maintain a palliative effect rather than offer cures to embedded difficulties.

A serious challenge to review the methods of tax-raising in the UK so that local authorities can levy funding locally and have greater control over its use is long overdue. The Mayor of Bordeaux raises 75 per cent of his spend locally, leaving dependence on the national purse, and argument about receiving support, to a lesser battle. Delegation of taxation, and particularly the hypothecation of funds for particular uses, has been an alien thought to the Treasury in all post-war British governments.

There are many people who judge that these islands are the most centrally controlled of Western democracies. However, if we revert to the deal hypothesised in the opening pages of this book, the responsibility and promise arising from prudent investment in growth areas must be addressed. Bristol, Bath, the West of England

provide a twist on the Parable of the Talents, where the unfortunate servant entrusted with the least of his master's wealth buries it for safety in the ground while his more blessed colleagues satisfy a ruthless master with a good return on higher original potential. The persistent problem with the West of England is one of embedded complacency resulting in the tendency to bury all five talents in the ground, ignoring the fact that this neither keeps the resource and heritage safe nor secures a justifiable return for the future.

A wise investment here will yield a most fruitful return for the UK as a whole and might just provide the tipping point for the creation of a greater universal good.

This book is a starting point, the end of just a beginning. It is a pointer to the opportunities available to the West of England as a key British city-region and should set a helpful example to other places. As the twenty-first century unfolds, the role and importance of city-regions everywhere in enabling the continuity of civilisation against a background of diminishing resource and natural threats will be crucial to the survival of the human race. The business organisation that has backed these ideas and formulated new and productive approaches to such challenges for a quarter of a century will continue to facilitate discussion, exploration and delivery of solutions that will improve our society and enhance people's proper enjoyment of life. In all of its iterations – as The Bristol Initiative, as The Bristol and Bath and South Gloucestershire Chambers of Commerce, as Business West – this business body has worked in productive partnership with the various public authorities. It has found common ground and common purpose and has offered an inspiring and honest approach to the challenge for businesses to be good corporate citizens.



# Endnotes

## Opening sections

1 This figure has been converted from the 100km2 given on the Bristol City Council website at <http://is.gd/Fjshcc>.

2 From Chapter VI ‘Concerning New Principalities Which Are Acquired By One’s Own Arms and Ability’ of *The Prince* (1515) available at <http://is.gd/ARCWZs> on the Project Gutenberg website.

3 Quoted in Moore, Charles (1921) *Daniel H Burnham, Architect, Planner of Cities, Volume 2* Boston, Massachusetts: Houghton Mifflin p 1921.

4 See The Initiative section of the Business West website at <http://is.gd/JqncqW> for further details.

5 See the workshop report on the Bristol 2050 website at <http://is.gd/cXz9gY>.

6 See the workshop report on the Bristol 2050 website at <http://is.gd/d7NRjg>.

7 See the workshop report on the Bristol 2050 website at <http://is.gd/Tkwvrt>.

8 The final report was drafted by SQW Consulting in June 2010. The story boards containing the key points are available on The Initiative website at <http://is.gd/YBddEn>.

9 See the website marking the centenary of the plan at <http://is.gd/XP0fbE> for further details.

10 See Office of the Deputy Prime Minister (2004) ‘Competitive European Cities: Where Do the Core Cities Stand?’ p 11 available at <http://is.gd/tGcXsW>. The only other English Core City to appear in the top 50 is Leeds.

11 See table ‘Economic Activity: Resident Working Age Population: April 2007-March 2008’ in ‘Intelligence West: West of England Key Statistics 2008’ available at <http://is.gd/zTJXJn> for employment figure. See ‘Office of National Statistics: Labour Market Profile West of England 2009’ available at <http://is.gd/FyTx5j> for population figure. See table ‘NUTS3.1: Headline GVA at Current Prices’ in the report ‘Office for National Statistics: Regional, Sub-regional and Local Gross Value Added 2009’ available at <http://is.gd/o4xFWO> for combined GVA of the local authorities.

12 See ‘Intelligence West: West of England Key Statistics 2008’ as above.

13 Figures from the Visit Bath website at <http://is.gd/x8cKfl>.

## The West of England City-Region: Where we have come from

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Foyle, Andrew (2004) *Bristol* Yale University Press: New Haven and London.

Haddon, John (1981) *Portrait of Avon* Robert Hale: London.

Haddon, John (1982) *Portrait of Bath* Robert Hale: London.

Little, Bryan (1976 4th ed) *Portrait of Somerset* Robert Hale: London.

Little, Bryan (1971) *Portrait of Bristol* Robert Hale: London.

Walker, Frank (1972) *The Bristol Region* Nelson: London.

1 The brassworks were run by the Quakers Abraham Darby and Richard Champion, and, as part of the arrangement, they helped to open a Catholic chapel for the workers, despite the generally anti-Catholic sentiments in the city. See Dresser, Madge ‘Protestants, Catholics and Jews: Religious Difference and Political Status in Bristol, 1750-1850’ in Dresser, Madge and Ollerenshaw, Philip (ed) (1996) *The Making of Modern Bristol* Redcliffe Press: Bristol pp 96-123 and particularly page 102.

2 See the organisation’s website at <http://www.merchantventurers.com>.

3 Figures taken from papers for agenda item 10 (Rail Update) for meeting of the Joint Executive Transport Committee for the West of England, 21 January 2011 available at <http://is.gd/RmtkZs>.

4 See Bristol City Council (2009) ‘Knowle West Regeneration Framework: Baseline Briefing’ p 24 available at <http://is.gd/5vIbHj>.

5 A more detailed account of the development of Broadmead can be read in Jenner, Mike (2000) ‘The Origins of the Broadmead Shopping Centre’ in *Post-War Bristol 1945-1965: Twenty Years That Changed the City* Bristol Branch of the Historical Society pp 9-24.

6 Quote taken from the HP Labs Bristol webpage at <http://www.hpl.hp.com/bristol/>.

7 See page 32 of ‘Delivering a Sustainable Transport System: Main Report’ from the Department for Transport (November 2008) available at <http://is.gd/RkNsF3>.

8 See ‘West of England City-regional Economic Assessment, August 2008’ from the West of England Partnership p 53.

9 A more detailed account of the decline of the city-centre docks can be read in Elkin, Paul (2000) ‘Old Docks – New Problems at the Port of Bristol 1945-1965’ in *Post-War Bristol 1945-1965: Twenty Years That Changed the City* Bristol Branch of the Historical Society pp 25-48.

10 Further details are on the Temple Quay website at <http://is.gd/bqjIOF>.

11 See news item on research findings from July 2010 available on the This is Bristol website at <http://is.gd/trhCwY>.

12 For research on the value of culture in the new economy, see in particular Florida, R (2002) *The Rise of the Creative Class: and How It’s Transforming Work, Leisure, Community and Everyday Life* Basic Books: New York. For a critique of the assumptions about the impact of culture upon city regeneration from this period, see Landry, C (2002) ‘Urban showmanship and Deeper Regeneration’ in *Town & Country Planning* October pp 263-265.

## The West of England City-Region: Where we are today

1 See Chris Webber and Paul Swinney’s report for the Centre for Cities entitled ‘Private Sector Cities: A New Geography Opportunity’ (June 2010) available at <http://is.gd/Czo03c>.

2 Figures taken by David Lock Associates from the Homes and Communities Agency’s ‘Results from the 2008 National Land Use Database of Previously-Developed Land in England’.

3 See further details of the project on the Crest Nicholson website at <http://is.gd/SLhPqP>.

4 See page 3 of the Environment Agency’s brochure ‘Managing Flood Risk on the Severn Estuary’ (January 2011) available at <http://is.gd/YSZe8o>.

5 See ‘Sub-regional Employment and Skills Analysis, 2010’ from the Skills and Learning Intelligence Module, February 2010 p 71.

6 See South West Observatory’s ‘The National Employer Skills Survey 2005 for the South West of England: West of England Summary Report’ p 12 available at <http://is.gd/DKheAt>.

7 In 2009 there were approximately 71,400 full- and part-time students attending these universities with almost 17,000 students graduating each year according to the Green Investment Bank submission from Invest in Bristol, 2011 p 10.



- 8 See the Labour Market section of the Invest West website at <http://is.gd/nY32s8>.
- 9 From the South West Observatory presentation ‘Graduate Retention in the South West’ by David Draycott (February 2010) available at <http://is.gd/wOYQfH>.
- 10 See point 9b in papers for agenda item 9 (Driving up the Skill Base) for meeting of the West of England Partnership, 29 November 2010 available at <http://is.gd/082HdY>.
- 11 See ‘West of England Sub-regional Economic Assessment, August 2008’ from the West of England Partnership p 24.
- 12 See ‘West of England Sub-regional Economic Assessment, August 2008’ from the West of England Partnership p 25.
- 13 See Invest in Bristol’s report ‘Major Employers in Bristol & South Gloucestershire’ at <http://is.gd/S4qNH5> and the Business Matters website for B&NES at <http://is.gd/2aJLju>.
- 14 See ‘Sub-regional Employment and Skills Analysis, 2010’ from the Skills and Learning Intelligence Module, February 2010 p 111.
- 15 See papers for agenda item 8 (Tackling Worklessness) for meeting of the West of England Partnership Skills and Competitiveness Board, 15 September 2010 available at <http://is.gd/7OSjIm>.
- 16 See papers for agenda item 8 (Tackling Worklessness) (as above).
- 17 See ‘Sub-regional Employment and Skills Analysis, 2010’ from the Skills and Learning Intelligence Module, February 2010 p 75.
- 18 There is material on the link between multiple deprivation and worklessness in the West of England Partnership’s report ‘West of England: Tackling Worklessness Plan 2010-2012’ available at <http://is.gd/Oi5AF1>.

- 19 See, for example, the material on transport in the report by Roger Tym and Partners ‘Responding to Infrastructure Delivery and Planning Issues in the West of England, May 2010’ produced for the West of England Partnership. The Executive Summary is available at <http://is.gd/xck3Nq> and the Final Report at <http://is.gd/McSeRm>. Note that, though still useful, some of the recommendations of this document were partly based upon the Regional Spatial Strategy housing targets which are no longer relevant. For example, it includes calculations for South West and South East Bristol urban extensions.
- 20 See the GVA Grimley report ‘Transport Friendly Towns, February 2009’ available at <http://is.gd/Lplkqi>. The highest rated city in the study was Cardiff.
- 21 See the Campaign’s ‘2010 Car Dependency Scorecard’ on its website at <http://is.gd/4ow6II>.
- 22 See the West of England Partnership’s ‘The West of England Multi Area Agreement’ (August 2009) p 29 available at <http://is.gd/VyO4ho>.
- 23 See pages 28 and 31 of ‘Building a Positive Future for Bristol after Peak Oil’ by the Green Momentum Group and Bristol City Council available at <http://is.gd/xnN8bQ>.
- 24 See Chapter Seven: Accessibility of the Transport Plus Joint Local Transport Plan 3 available at <http://is.gd/QIqO3r> for this and other relevant statistics on how accessibility by public transport can affect quality of life.
- 25 See page 42 of the Public Transport Supplementary document on the Travel Plus website available at <http://is.gd/uSrRY0> for this and other key facts.
- 26 See information on the Travel Plus website as above.
- 27 For the city-region’s connectivity in relation to the rest of Europe, see the maps in the report ‘ESPON Project 1.2.1, Transport Services and Networks: Territorial Trends and Basic Supply of Infrastructure for Territorial Cohesion, September 2004’ available at <http://is.gd/Jb9U2s>.
- 28 See the airport’s page of key facts and figures at <http://is.gd/K0X1CL>.

- 29 See Science City Bristol at <http://is.gd/FykK2R>.
- 30 See Lucy Parker’s report ‘Future Story: Bristol and the South West’ at <http://is.gd/Gy0MMM> for further details of some of the city-region’s innovative companies.
- 31 See the SPark website at <http://s-park.co.uk> for further details.
- 32 See ‘West of England City-regional Economic Assessment, August 2008’ from the West of England Partnership p 28.
- 33 See ‘Sub-regional Employment and Skills Analysis, 2010’ from the Skills and Learning Intelligence Module, February 2010 p 35.
- 34 See ‘Sub-regional Employment and Skills Analysis 2010’ from the Skills and Learning Intelligence Module, February 2010 p 36.
- 35 See, for example, the Bristol Cultural Development Partnership report ‘Making a Difference – An Impact Assessment of Animated Encounters, Brief Encounters and Wildscreen’ (2003) for an insight into the role of culture in companies’ decisions to relocate to the West of England (available on request).
- 36 See the West of England Partnership paper ‘Sector Skills and Competitiveness Statement: Environmental Technologies’ available at <http://is.gd/0t55xn> for further details.
- 37 From Rosemary Bailey’s paper ‘Carbon Assumptions for the 2050 Plan’.
- 38 See the Bristol Water website at <http://www.bristolwater.co.uk> for further details.
- 39 See the Wessex Water website at <http://www.wessexwater.co.uk> for further details.
- 40 The Ecotricity website includes monitoring reports on the impact of the turbines on bird activity, an issue of concern in an area valued for its wildlife. See <http://is.gd/cPSdmz>.
- 41 See the conclusions of the feasibility study on the Department of Energy and Climate Change website at <http://is.gd/e7yEnu>.

- 42 See the Bristol Port Authority website at <http://www.bristolport.co.uk/about>.
- 43 See the Key Findings on cordons on the Bristol City Council website at <http://is.gd/8jMdL2> and the Clifton Suspension Bridge website at <http://www.cliftonbridge.org.uk/>.
- 44 See Miner, Paul and Sinden, Neil (2010) ‘Green Belts – A Greener Future’ *Town & Country Planning* June 2010 pp 292-298 for a summary of a comprehensive study on how green belt land is currently used in the UK.
- 45 See Campaign to Protect Rural Britain and Natural England’s joint 2010 brochure ‘Green Belts – A Greener Future’ p 16 for figures of coverage of existing green belt areas.
- 46 Quote taken from the Bristol City Council webpage ‘Food for Bristol’ at <http://is.gd/phQX3f>.
- 47 See the report ‘Who Feeds Bristol: Towards a Resilient Food Plan’ at <http://is.gd/1ZuibL>, which builds on findings in the Bristol peak oil report (as above) and explores the strengths and vulnerabilities in the current food system in more detail.
- 48 See ‘Chapter Seven: Accessibility’ p 77 on the Travel Plus website <http://is.gd/QIqO3r>.
- 49 See page 5 of Speare, Alden and White, Michael J ‘Optimal City Size and Population Density for the 21st Century’ available on the Negative Population Growth website at <http://is.gd/eJCLBm>. This is based on research from 1975. New research conducted 15 years later found opinions had remained unchanged.
- 50 See the introduction to Centre for International Competitiveness’ ‘UK Competitiveness Index 2010’ for a definition of competitiveness. It is available as a download at <http://is.gd/YDNTcz>. Bristol was placed eighth in the overall city competitiveness ranking and 19th in the happiness ranking. The city-region as a whole contributes around 25 per cent of the South West’s GVA (as referenced in the West of England Partnership’s ‘Bid for City Forerunner Status’ p 5 available at <http://is.gd/cq8ILL>).



51 See Coombes, Tessa (2008) ‘The Bristol-Swindon-Gloucester Triangle’ on the Business West website at <http://is.gd/RUodJZ>.

52 See the summary of the Economic and Social Research Council research report at <http://is.gd/MdVSv5>, which highlights this factor in Bristol’s success. The same report also highlights the continuing problem of areas of high deprivation existing alongside areas of economic success.

**The West of England City-Region:  
Where we will be**

1 See <http://is.gd/z7ZtKw> for latest news.

2 See page 11 of the report by Roger Tym and Partners ‘Responding to Infrastructure Delivery and Planning Issues in the West of England, May 2010’ produced for the West of England Partnership and available at <http://is.gd/McSeRm>. See also the map on page 10 of Bristol City Council’s ‘Deprivation in Bristol 2007’ available at <http://is.gd/Y979Bs>.

3 These figures are taken from a briefing paper on worklessness by Pat Steward prepared for the 2050 plan.

4 See press release on the University of Bristol website at <http://is.gd/BMwR2Z> marking the publication by the Calouste Gulbenkian Foundation in November 2009 of Wetz’s book *Urban Village Schools* for an outline of his recommendations.

5 For example, Richard MacCormac’s work on this is most recently covered in *Sustainable Suburbia*, May 2010, with the support of HCA.

6 See Boardman, Brenda (2007) *Home Truths: A Low-Carbon Strategy to Reduce UK Housing Emissions by 80% by 2050* University of Oxford’s Environmental Change Institute p 5 available at <http://is.gd/nzF1hF>.

7 See Boardman (as above) p 6.

8 See Boardman (as above) p 6.

9 See the Fuel Poverty Indicator at <http://www.fuelpovertyindicator.org.uk/>.

10 See the project’s page on the Forum for the Future website at <http://is.gd/hm85wB>.

11 See page 14 of the Sustainable Communities Forum report ‘Stock Take: Delivering Improvements in Existing Housing’ (July 2006) available at <http://is.gd/V6wkVu>.

12 See bullet point 16 of ‘West of England Key Statistics Winter 2008’ on the West of England Partnership website at <http://is.gd/zTJXJn>.

13 See figures available in spreadsheet at <http://is.gd/y40qbk> on the West of England Partnership website.

14 See Bramley, Glen (2009) ‘West of England Strategic Housing Market Assessment’ p 24 available on the West of England Partnership website at <http://is.gd/LU7PZt>.

15 See Bramley’s report (as above) p 58.

16 See Bramley’s report (as above) p 63.

17 See Bramley’s report (as above) p 25.

18 See ‘West of England Partnership Draft Sub-Regional Delivery Plan Version 1.2’ (December 2007) p 27 available at <http://is.gd/VW4jGJ>.

19 See ‘Greater Bristol Strategic Transport Study – Final Report’ (2006) p 2-11 from WS Atkins available on the W S Atkins website at <http://is.gd/6QRvmp>.

20 See West of England Partnership report ‘Our Future Transport: West of England Sub Region: An Initial Overview Towards the Development of a Transport Innovation Fund Application’ (October 2007) p 4 available at <http://is.gd/NcDKEW>.

21 See ‘West of England Partnership Draft Sub-Regional Delivery Plan Version 1.2’ (December 2007) p 27 available at <http://is.gd/VW4jGJ>.

22 See ‘Greater Bristol Strategic Transport Study – Final Report’ (as above).

23 For further details see the Highways Agency brochure ‘Managed Motorways: M4 Junctions 19-20, M5 Junctions 15-17’ available at <http://is.gd/4AStkP>.

24 See page 44 of the Public Transport Supplementary document on the Travel Plus website available at <http://is.gd/uSrRY0>.

25 For example, see Campaign for Better Transport’s response in October 2009 to the Light Rail Inquiry by the All-Party Parliamentary Light Rail available at <http://is.gd/uKQdg7> for a summary of the advantages of introducing trams to areas of regeneration.

26 See the website of the Portishead Railway Group at <http://portisheadrailwaygroup.org> for details of the campaign to revive the service.

27 See the URBED/TEN report ‘Learning from Lille and Roubaix: Sub-regional Planning and the Coordination of Transport and Development’ (2006) p 18 available at <http://is.gd/mHv1BC>.

28 See ‘ESPON Project 1.2.1, Transport Services and Networks: Territorial Trends and Basic Supply of Infrastructure for Territorial Cohesion, September 2004’ available at <http://is.gd/Jb9U2s>

29 See the High-Speed Rail page of the Green Gauge 21 website at <http://is.gd/nQWTex>.

30 See the Emscher case study on the Sustainable Cities website at <http://is.gd/qfLkbM>.

31 See the House of Commons’ Communities and Local Government Committee’s ‘Coastal Towns: Second Report of Session 2006-2007’ pp 8-9 available at <http://is.gd/9Dq4Lr>.

32 See Communities and Local Government’s ‘England’s Seaside Towns: A “Benchmarking” Study’ p 18 available at <http://is.gd/XXrVji>. Note that Clevedon was not included in the study.

33 See ‘England’s Seaside Towns’ p 24 as above.

34 See page 28 of the New Local Government Network City Regions Commission report ‘Seeing the Light: Next Steps for City Regions’ (December 2005) available at <http://is.gd/flb4jd>. Many of the conclusions we have reached about the need for a form of city-regional governance are backed by the findings of this report.

35 See the paper by Tamás M Horváth ‘City-Region as “Marble-Cake”’ on The URBACT Tribune website at <http://is.gd/eSDtX0>.

36 See the press release on the Centre for Cities website <http://www.centreforcities.org/bigshot>, which also includes a link to a downloadable PDF of the report ‘Big Shot or Long Shot: How Elected Mayors Can Help Drive Economic Growth in Cities’ (June 2011).

37 See press release and related documents regarding the granting of new powers for the Greater Manchester city-region on the GMCA website at <http://is.gd/X13Dc2>.

38 See the websites <http://chicagometropolis2020.org/>, <http://www.greatertoronto.org/>, <http://is.gd/5zFq4m> and <http://is.gd/frelsV>.

39 See page 224 of the Office of the Deputy Prime Minister’s report ‘State of the English Cities: Volume 1’ (March 2006) available on the BBC News website at <http://is.gd/6CjEja>.

All urls given in these Endnotes were valid as at July/August 2011.



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The author takes full responsibility for the final content of this book, which may not reflect the opinions of those who have been consulted and who have contributed to its development.



We have left space for you to add your own thoughts about how to plan most effectively for 2050. What do you think should be the vision's guiding principles? Which drivers for change need to be taken into account? What are the short-term strategic goals? What are the 'grand schemes' that we should aspire to? Overleaf is a map on which you can sketch out your ideas for transport, urban expansion and other features of your plan.











*2050: High in Hope* offers some preliminary thinking on how the West of England can best plan strategically for the challenges it will face over the next 40 years and manage its inevitable – and desirable – growth.

It is a starting point for further debate, research and development, and a call to resist complacency and to aspire to the highest ambitions.

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